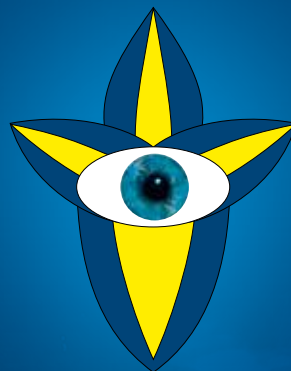


EDITION 2018

Iris



BIOTECH GMBH

RESIN GUIDELINE

**Resins for Solid Phase Peptide & Organic Synthesis
Scavenger Resins**

Empowering Peptide Innovation

Headquarters:

Iris Biotech GmbH
Adalbert-Zoellner-Str. 1
95615 Marktredwitz, Germany
Phone: +49 92 31 97 121 - 0
Fax: +49 92 31 97 121 - 99
Email: info@iris-biotech.de
Internet: www.iris-biotech.de

Office Belgium:

Phone: +32 56 31 52 00
Fax: +32 56 31 15 00

Distribution Partners:

India:

Sumit Biosciences Pvt Ltd.
D Wing, Krishna Complex
Subhash Road - A, Vile Parle (East)
Mumbai - 400 057, India
Phone: +91 22 6693 8885 / 6
Fax: +91 22 6699 0665
Skype: [sumit.bio](https://www.skype.com/sumit.bio)
Email: sumit_exports@yahoo.com
Internet: www.sumitbiomedical.com
www.sumitglobal.com

Japan:

BizCom Japan, Inc.
7F K2 buiding 5-28-1, Higashigotanda, Shinagawa-ku,
Tokyo 141-0022, Japan
Phone: +81 3 6277 3233
Fax: +81 3 6277 3265
Mobile: +81 70 5546 6277
Email: irisbiotech@bizcomjapan.co.jp

USA & Canada:

Peptide Solution LLC
8110 S. Houghton Road, Suite 158 PMB 152
Tucson, AZ 85747, USA
Phone: +1 502 314 1515
Fax: +1 520 422 3333
Email: sales@easy peptide.com
Internet: www.easypeptide.com

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1. Introduction: The Origins and Background of SP(P)S

The main advantage of solid phase synthesis (SPS) in comparison to classical solution phase synthesis is the fast and easy separation of desired product and excess reagents by filtration. In the most common form of solid phase synthesis, the molecule being synthesized (e.g. a growing peptide chain) is attached to an insoluble solid support that is swollen in a certain solvent, while reagents are added to the suspension in a dissolved state. This setup enables the removal of excess reagent and dissolved byproducts by simply discarding the reaction solution by filtration followed by washing of the resin with various solvents. Consequently, an excess of reagents can usually be employed in SPS in order to shorten reaction times and ideally allow for a quantitative turnover of the substrate, which in turn leads to higher yields.

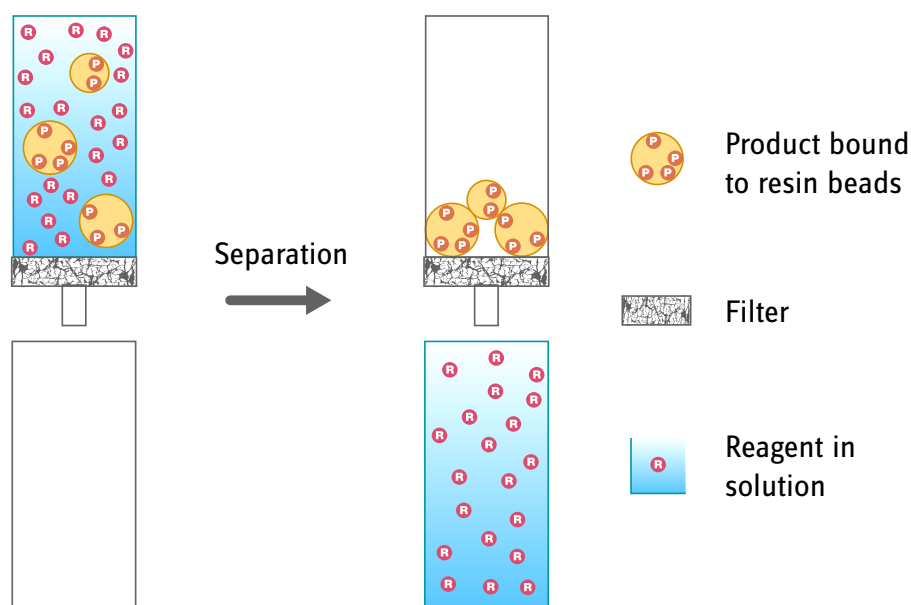


Fig. 1: Solid-supported synthesis enables fast and easy separation of product and reactants as one of them is bound to insoluble resin beads that can be simply filtered off from the reaction solution.

The main advantages of SPS are:

1. Fast work-up through easy separation of solid support from dissolved reactants and byproducts by filtration, and multiple, rapid washing steps.
2. Improved reaction times, turnover and yield by use of excess amounts of reagents.
3. The syntheses can easily be automatized.
4. Toxic or hazardous materials can be handled safely while they are attached to the resin.
5. Minimal physical product loss.
6. Pseudo-dilution phenomena on an individual bead can enable cyclization and avoid formation of dimers.

Originally SPS was developed to overcome the tedious and repetitive way of solution phase synthesis of peptides. Since that time it has been adapted and optimized for the synthesis and production of other biopolymers like DNA and RNA, as well as small organic molecules.

A typical solid phase synthesis consists of a series of alternating reaction and washing steps, the repetitiveness of which lends itself well to the (automated) synthesis of oligomeric structures such as oligonucleic acids, or peptides. The first reaction step in any solid phase peptide synthesis is the attachment of a bi- or more-functional amino acid to the solid support. Only one of the building blocks' functional groups is free to react, while all others are protected to avoid unwanted side-reactions. Subsequently, a second functionality is deprotected, so that a further amino acid can be coupled to the first resin-bound building block. The peptide chain is then elongated by reiterating this sequence of coupling and deprotection cycles. In the final steps, the molecule is cleaved from the resin, and all remaining protection groups are removed. This general reaction scheme is exemplified in Figure 2.

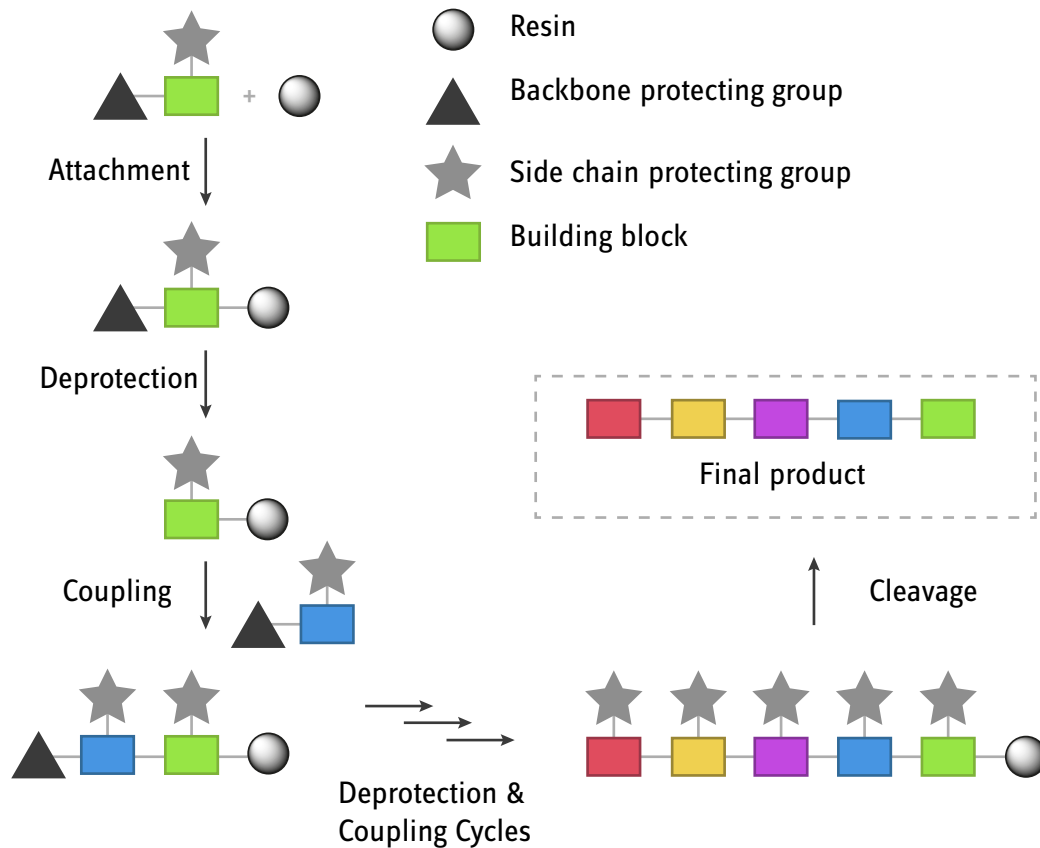


Fig. 2: General reaction sequence of SPS. After attachment of the first building block to the resin additional building blocks are attached in reaction cycles of deprotection and coupling and the final product is cleaved from the resin.

The downsides of SPS are the high solvent consumption as well as the difficult analysis of intermediates and target molecule between reaction steps as well as process control. Intermediates are bound to the resin, which makes direct analytics difficult or impossible.

1.1 How Solid Phase Chemical Synthesis Started

In the late 1950s and early 1960s, Robert Bruce Merrifield developed solid phase peptide synthesis (SPPS) and demonstrated its usefulness by synthesizing a tetrapeptide [1]. For this pioneering work and his ensuing research on SPPS, he was awarded the Nobel prize in 1984. The original resin named after him is a chloromethylated copolymer of styrene and divinylbenzene, which he chose over cellulose, polyvinyl alcohol, polymethacrylate and sulfonated polystyrene. This original discovery has survived until today, as most resins are still based on a polystyrene core. Depending on the exact polymerization conditions, the physical properties and morphology of the resin may vary. Especially for large scale syntheses, batch to batch variations of resins have to be monitored closely to ensure a consistent quality [2].

In parallel to the polystyrene solid support, Merrifield developed the Boc protection strategy for synthesizing peptides. In this strategy, the growing peptide chain is attached to the solid support via its C-terminus, while the N-terminus is protected with a Boc group (Figure 3).

1.2 Modern Synthetic and Strategic Developments of SPPS

Today, modern SPPS is performed using the Fmoc strategy due to the milder deprotection and cleavage conditions compared to the Boc-strategy. Being able to avoid the use of hazardous HF and to reduce the amount of TFA makes the Fmoc strategy more appealing. Moreover, the results for routine peptide syntheses are often superior for the Fmoc strategy [3]. A higher number of different Fmoc building blocks are available, enabling the synthesis of a larger diversity of peptides and/or allowing alternative synthetic strategies that are less laborious, faster and possibly more economic. In addition, the aromatic system of the dibenzofulvene and fulvene-piperidine adducts that are produced during the deprotection step allow the (automated) monitoring of the completeness of the Fmoc removal [4; 5]. Similar to the Boc strategy, the C-terminus is attached to the resin, while the N-terminus is protected using the base-labile Fmoc group (Figure 3).

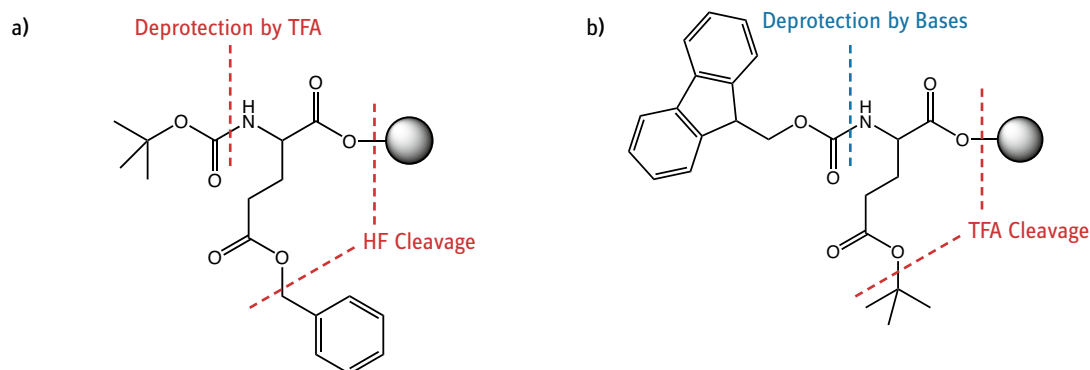


Fig. 3: Comparison of Boc-strategy a) and Fmoc-strategy b) for SPPS exemplified on a single, fully protected glutamic acid attached to the resin.

Apart from facilitating the synthesis of single structures, the ease of handling of the solid supported molecules has led to a variety of approaches to generate vast libraries of structures using combinatorial approaches. The split-mix technique splits a batch of resin into equal portions to which different molecules are coupled, and subsequently combines and mixes the resin beads [6]. By repeating these steps, extensive libraries of peptides and organic compounds can be generated as a mix within a short time and with relatively low effort. Alternatively the tea-bag method allows for the parallel synthesis of molecules not as a mixture, but as defined products, since the solid support is enclosed in a so-called teabag which serves as simple reaction vessel [7].

2. Physical Properties of Resins

2.1 Shape and Bead Size

The size of the resin beads can be described in different ways. The two most common are the standard US mesh size (also known as Tyler Mesh size) and the actual diameter of the resin beads. Both values are correlated to each other in an inverse manner as the density of the mesh of a sieve necessary to retrieve a certain particle size will get higher as the actual diameter of the resin beads gets smaller (Figure 4). The smaller the beads are, the faster the reaction kinetics will be, as surface area is larger in relation to the beads volume and allows fast diffusion of the reagents into the resin beads. However, if the beads are too small, the filtration time will be extended. For practical purposes a compromise between reaction kinetics and filtration time has to be made, so, a resin with a 100-200 mesh offers the best balance.

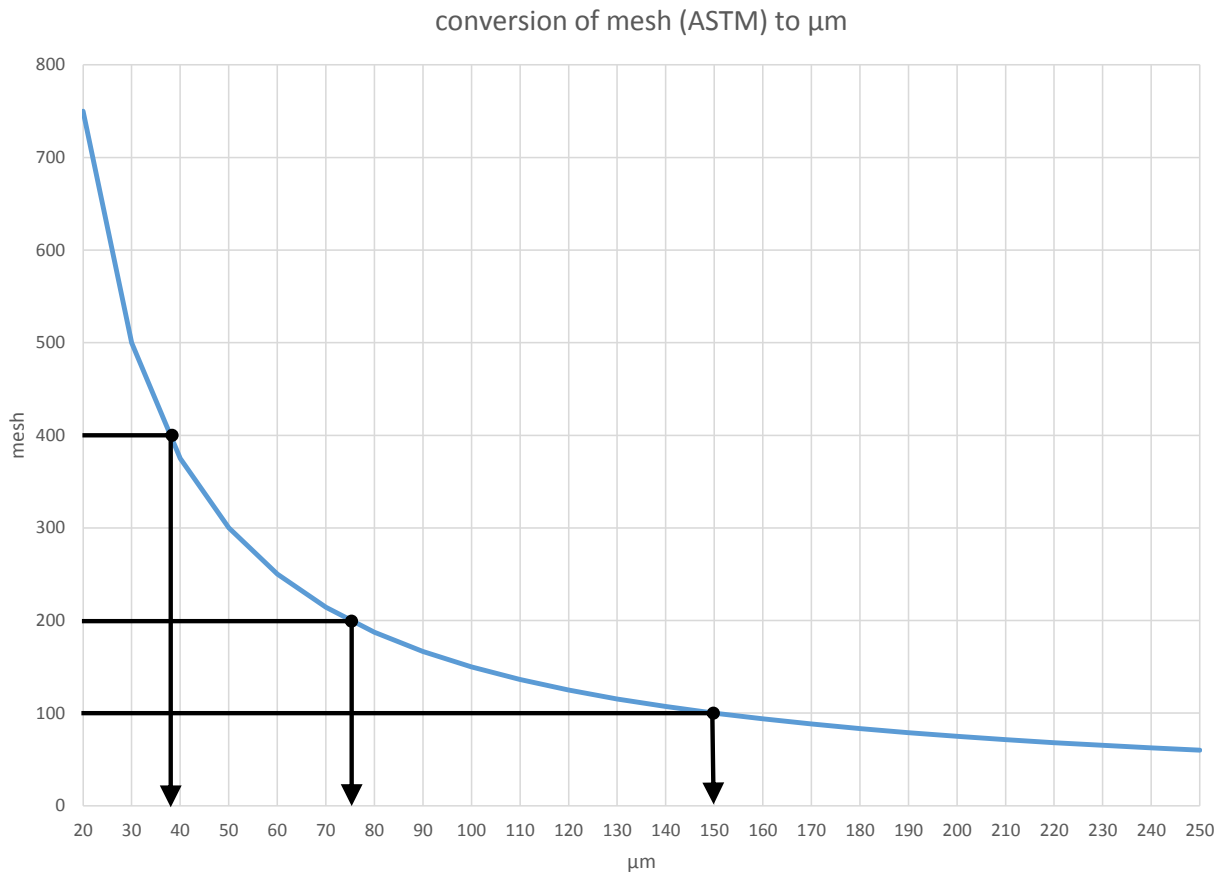


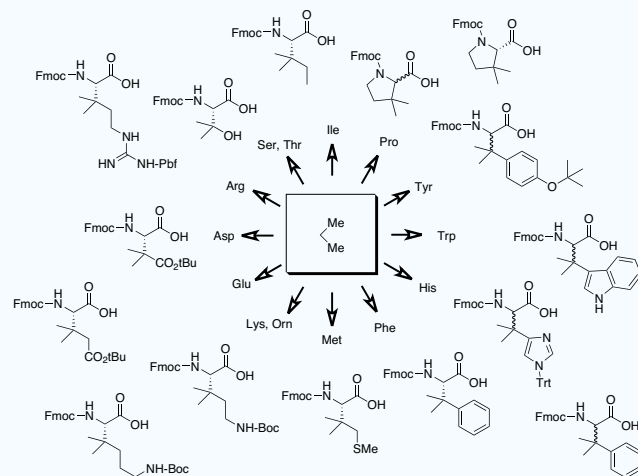
Fig. 4: Relation between mesh size and bead size of the particle [8]. The higher the mesh size is, the smaller are the resin beads.

size/ μm	beads/g	capacity/bead [nmol] (for Polystyrene, = 1 mmol/g)	capacity/bead [nmol] (for TentaGel® S, = 0.28 nmol/g)
750	4,620	232	65
700	5,010	196	55
650	6,260	157	44
600	7,960	125	35
550	10,340	96	27
500	13,760	71	20
450	18,870	53	15
400	26,870	36	10
350	40,110	25	7
300	63,690	14	4
250	110,060	9	2.5
200	214,970	4.6	1.3
180	294,880	3.4	0.94
150	509,550	2	0.55
130	782,770	1.3	0.35
100	1.72×10^6	0.6	0.16
90	2.86×10^6	0.4	0.1
35	4.55×10^7	22×10^{-3}	6.2×10^{-3}
20	2.4×10^8	3.6×10^{-3}	1×10^{-3}
10	1.95×10^9	3.6×10^{-4}	1.3×10^{-4}
5	1.54×10^{10}	6.4×10^{-5}	1.8×10^{-5}

Tab. 1: Correlation of particle size, number of beads per gram resin and capacity per single bead

P1'-Modification by β,β -Dimethyl Amino Acids Renders Peptide Therapeutics Resistant to Proteolytic Degradation

A new approach to improve proteolytic stability is the incorporation of β,β -dimethylated amino acids into peptide sequences at the P1' position (i.e. C-terminal of the enzyme cleavage site). This type of modification renders peptides highly resistant to serine protease degradation, usually without significant alteration of their biological activity. This includes stability towards dipeptidyl peptidase IV (DPP IV), dipeptidyl peptidase 8 (DPP8), fibroblast activation protein α (FAP α), α -lytic protease (α LP), trypsin, and chymotrypsin.



Inquire for the β,β -Dimethyl Amino Acids of your choice!

2.2 Cross-linkage and Swelling

The most common resins are based on polystyrene (PS). These resins can be further functionalized with spacers (e.g. PEG-based) in order to alter the swelling behavior in certain solvents, as well as to allow for different chemical strategies. Aside from polystyrene, other matrices are used as basis for resins in SPPS, including polyacrylate, polyethylene glycol, and polyacrylamide. By modifying a resin with a grafted spacer or by changing the nature of a core polymer, the properties of a solid support can be adjusted to a given solvent to allow for a high swelling. Good swelling properties are an important factor in the choice of solid support, since reaction kinetics in SPS are diffusion controlled, i.e. the reaction rates are higher the faster the reactants are able to diffuse into the resin. This holds especially true for the synthesis of large molecules, where a high swelling ensures sufficient space for the growing molecule, and thus minimizes aggregation. Otherwise, deprotection or coupling reactions may be hampered or even completely inhibited, leading to a low yield of the final product.

Polystyrene resins are prepared by radical polymerization. The three-dimensional resin network is established by crosslinking the linear polymer chains with divinylbenzene (DVB). (Figure 5).

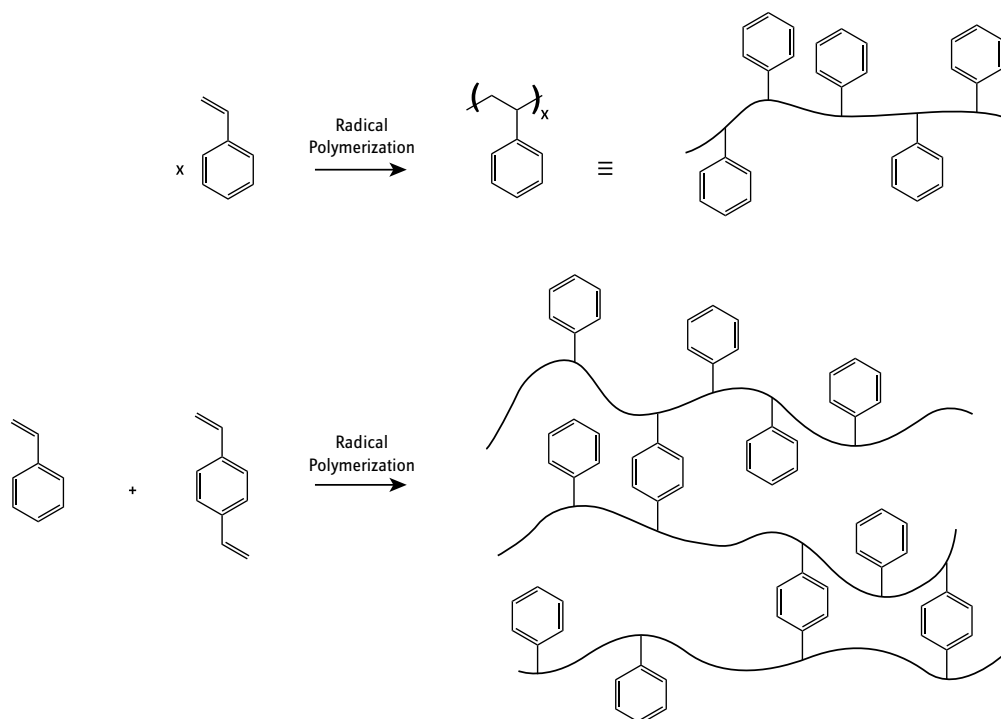


Fig. 5: A) Radical polymerization of styrene alone leads to single-stranded polystyrene chains.

B) A crosslinked network of these styrene chains is established by adding divinylbenzene to the reaction.

Polystyrene resins are typically crosslinked with 1% to 2% of DVB. In general, the higher the percentage of crosslinker, the lower the swelling of the corresponding resin in a given solvent (Figure 6). By attaching spacers to the polystyrene core, the properties of the PS-based solid support can be altered, a fact that can be used to tailor the resin's swelling properties to be compatible with certain solvents. For example, by grafting PEGspacers to the polystyrene core, even water can be used as solvent to swell the resin sufficiently, as exemplified by TentaGel resin that exhibits good swelling in both aqueous solutions and organic solvents.

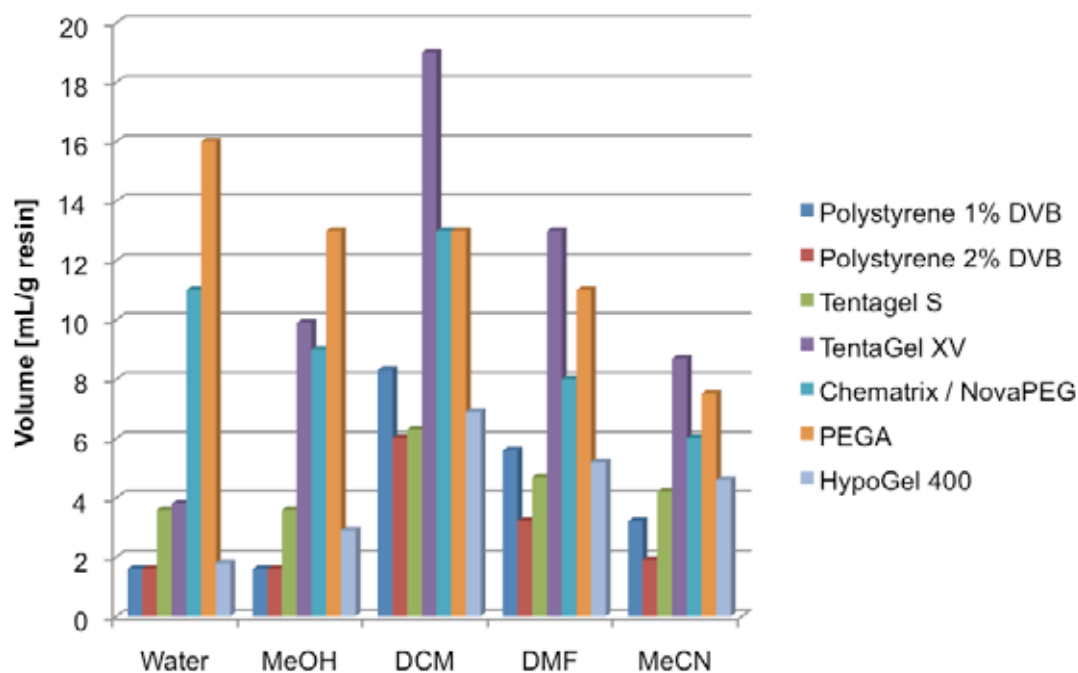


Fig. 6: Swelling characteristics of differently functionalized resins. Depending on the intended use and reaction conditions, resins optimized for hydrophilic and more hydrophobic solvents are available.

Not only spacers have an influence on the swelling properties, but also the crosslinking of the core resin. For TentaGel resin a reduction of the polystyrene core crosslinking resulted in higher swelling properties of the extended volume (XV) resin versus the original Tentagel S polymer [9; 10; 11]. High swelling creates an extended reaction space, which is a prerequisite for the synthesis of difficult sequences, aggregating peptides, mini proteins and PNAs in high purities and good yields (Figure 7).

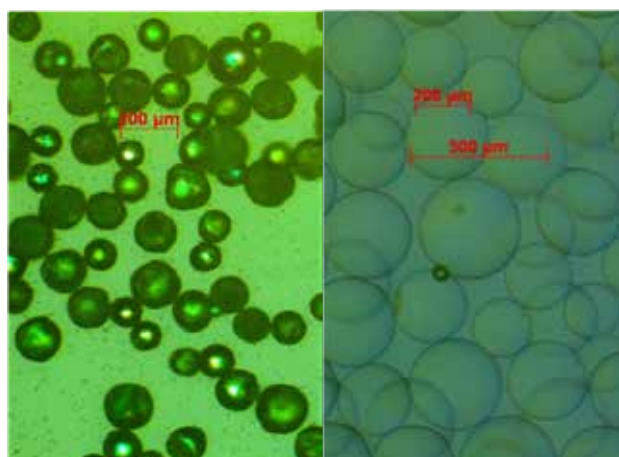


Fig. 7: TentaGel resin as seen under the microscope. Left: dry TentaGel XV. Right: TentaGel XV swollen in DMF, showcasing the resin's eponymous extended volume which is useful for the synthesis of long and difficult sequences.

2.3 Resin Substitution

Another important characteristic of solid supports is the quantity of accessible functional groups. The number of these reactive sites is expressed in millimoles per gram of resin and is called the resin substitution. When loading amino acids to a resin and determining this loading gravimetrically, the loading will be higher for amino acids with lower MW than for heavier amino acids. This fact results from the increasing weight of the loaded resin with growing MW of the attached amino acid and the proportional decrease of millimoles per gram. This is summarized in the following formula for weight gain substitution:

$$S_{(wt)} = \frac{Wt_{(g)} \cdot 1000}{Wt_{(add)} \cdot Wt_{(t)}}$$

$S_{(wt)}$: weight gain substitution [mmol/g]

$Wt_{(g)}$: weight gained by resin [g]

$Wt_{(add)}$: molecular weight added to the resin; MW of amino acid minus MW of leaving group [g/mol]

$Wt_{(t)}$: total weight gain of the resin after loading [g]

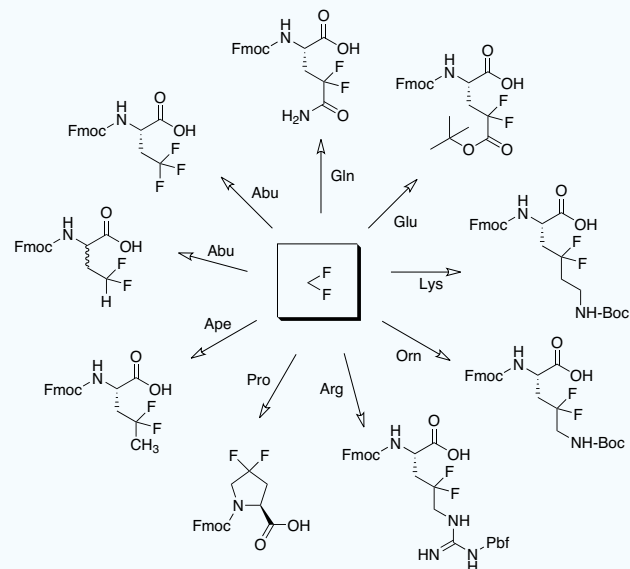
The chemical nature of the reactive sites for the different resins with their cleavage conditions, specific uses, synthetic strategies, and protocols how to attach amino acids to the resins are described below.

For long or difficult sequences it is often beneficial to choose a resin with low substitution, as possible side-reaction are avoided through lower local peptide concentration and enhanced reaction space on the resin.

γ,γ -Difluoro Amino Acids

The incorporation of fluorine building blocks into peptides may result in: increased chemical and thermal stability, resistance to degradation by proteases, and enhanced lipophilicity.

Appropriate peptides display better affinity to lipid membranes and stronger interactions with receptors. Stabilization of particular conformations and auto-assembly can be induced. These amino acids can also be useful as label for ^{19}F -NMR studies.



Inquire for the γ,γ -Difluoro Amino Acids of your choice!

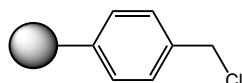
3. Base Resins

The basis resins for SPPS have functional groups that will generate a very stable bond to the molecules attached to the solid support. This is why these resins are not employed directly in SPPS, but usually serve as basis for further modifications. Common to all of these resins is that they are based on polystyrene and require harsh acidic conditions to cleave the final product. Resins that are functionalized with specific linkers are discussed in the subsequent chapter.

3.1 Merrifield Resin

Merrifield resin is a polystyrene polymer crosslinked by DVB that carries a chloromethylene group attached to the polystyrene backbone as reactive group to attach amino acids. Usually the functional group of the resin is incorporated by electrophilic aromatic substitution. However, copolymerization can also be used, which results in a more uniform final resin that may exhibit improved swelling properties well as more uniform reaction kinetics [12].

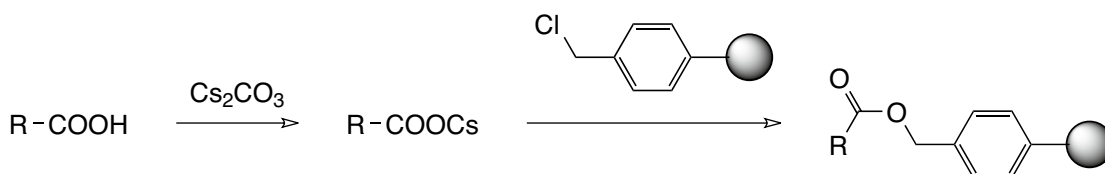
The standard Merrifield resin often serves as basis for other resins that use linkers to introduce a different swelling behavior, or reactive groups that allow for different chemistries and synthetic strategies.



The cleavage of substrates from Merrifield resin requires highly acidic conditions and specialized equipment. Aside from the standard HF procedure, low-high HF methods, as well as trifluoromethanesulfonic acid (TFMSA) and low-high TFMSA protocols can be employed [13; 14; 15; 16; 17; 18; 19].

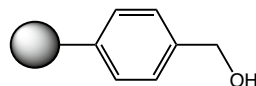
Protocol 1: Attachment of Carboxylic Acids to Merrifield Resin [20]

- | | |
|--|--|
| <p>I. Dissolve 1 mmol of carboxylic acid in 5 mL methanol and add 0.5 mL water.</p> <p>II. 20% aq. Cs_2CO_3 is added to adjust the solution to pH 7.</p> <p>III. The solution is evaporated to dryness under reduced pressure.</p> <p>IV. Add 2.5 mL DMF to the residue and evaporate to dryness under reduced pressure.</p> <p>V. Repeat step IV.</p> <p>VI. Swell the resin for 1 h in DMF (6-8 mL per gram of resin) for 1 h in a flask with heating mantle, thermometer on an orbital shaker.</p> <p>VII. Add 1 eq. (based on the chlorine substitution of the resin) of carboxylic acid caesium salt to the resin.</p> | <p>Note: the caesium salt must be absolutely dry to achieve optimal results</p> <p>VIII. The mixture is shaken at 50 °C for 24 h.</p> <p>IX. Remove solution by filtration and wash the resin with DMF, followed by 50% (v/v) aq. DMF, then 50% (v/v) aq. methanol and finally pure methanol.</p> <p>X. Dry resin to constant weight under reduced pressure.</p> <p>Note: If desired, the reaction can be checked for completeness by treating an aliquot of the resin with a solution of 4-(4-nitrobenzyl)pyridine in DMF/DCM [21]. Alternatively to this caesium salt based method a potassium fluoride method can be employed [22; 23].</p> |
|--|--|



3.2 Hydroxymethyl Resin

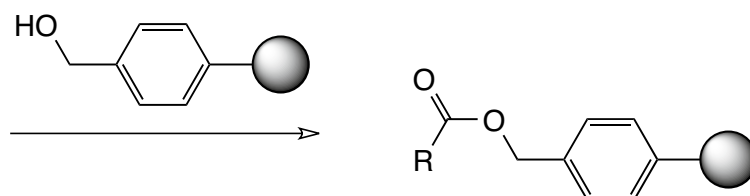
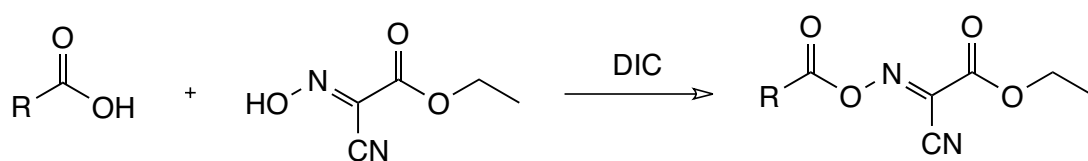
In contrast to the chloromethyl functionalized Merrifield resin, the hydroxymethyl analog exists to avoid unwanted side reaction. After incomplete resin loading, unreacted chloromethyl groups in the Merrifield resin can cause side reactions during peptide synthesis [24; 25]. In order to avoid such side reactions, remaining free hydroxyl groups can be capped with acetic anhydride.



The conditions for cleaving substrates from the hydroxymethyl resin are the same as for the conventional Merrifield resin.

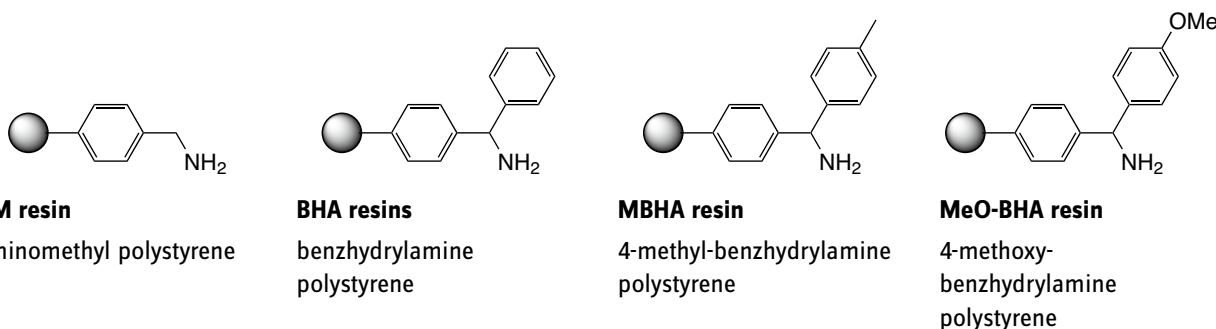
Protocol 2: Attachment of Carboxylic Acids to Hydroxymethyl Resin

- I. Swell the resin in DMF using 15 mL solvent per gram of resin.
- II. Dissolve 1.5 to 2.5 eq. (relative to the reactive sites on the resin) of carboxylic acid in another vessel with a minimum amount of DMF.
- III. Add the same amount of eq. of OxymaPure and dissolve. If necessary add more DMF.
- IV. Add the solution to the resin.
- V. Dissolve 0.1 eq. (relative to the reactive sites on the resin) of DMAP in a minimum amount of DMF in a separate vessel.
- VI. Add 1.0 eq. (relative to the amino acid) of DIC to the resin and subsequently add the DMAP solution and close the container with a drying tube.
- VII. Shake the solution for 2 to 3 h at room temperature.
- VIII. Add 2 eq. (relative to the reactive sites on the resin) of acetic anhydride and pyridine to the mixture and shake for 30 min.
- IX. Remove solution by filtration and wash the resin 3 times with DMF, 3 times with DCM, and finally 3 times with methanol.
- X. Dry resin to constant weight under reduced pressure.



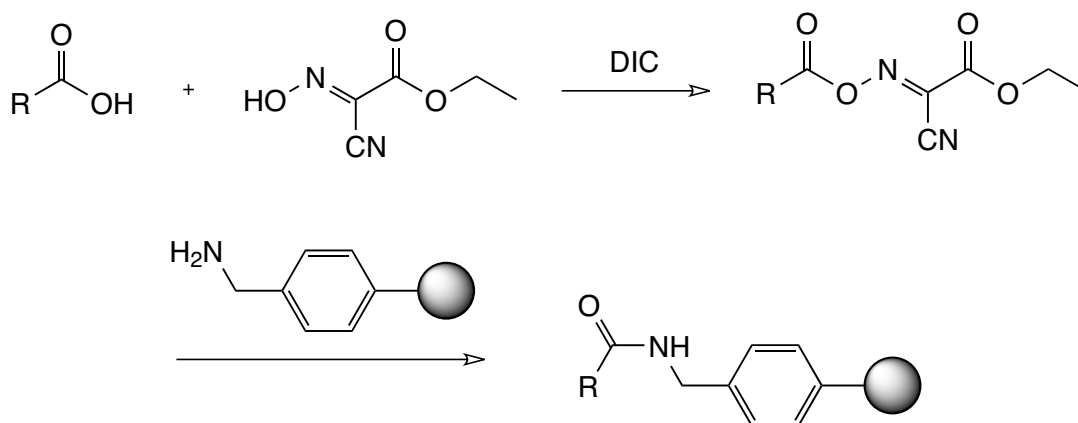
3.3 Amino Core Resins

Amino core resins were originally developed for preparing C-terminal peptide amides via the Boc SPPS strategy. The aminomethyl (AM) resin is structurally similar to the Merrifield and hydroxymethyl resin having an amino group instead of a chloro or hydroxyl group, respectively [26; 27]. Additionally, two sterically more demanding resins have been developed with the benzhydrylamine (BHA) [28; 29; 30] and 4-methylbenzhydrylamine (MBHA) resins [31; 32]. Although the BHA and especially the MBHA resin are more sensitive to acid than the AM resin, they still require harsh acidic conditions (HF or TFMSA) for the final product cleavage.



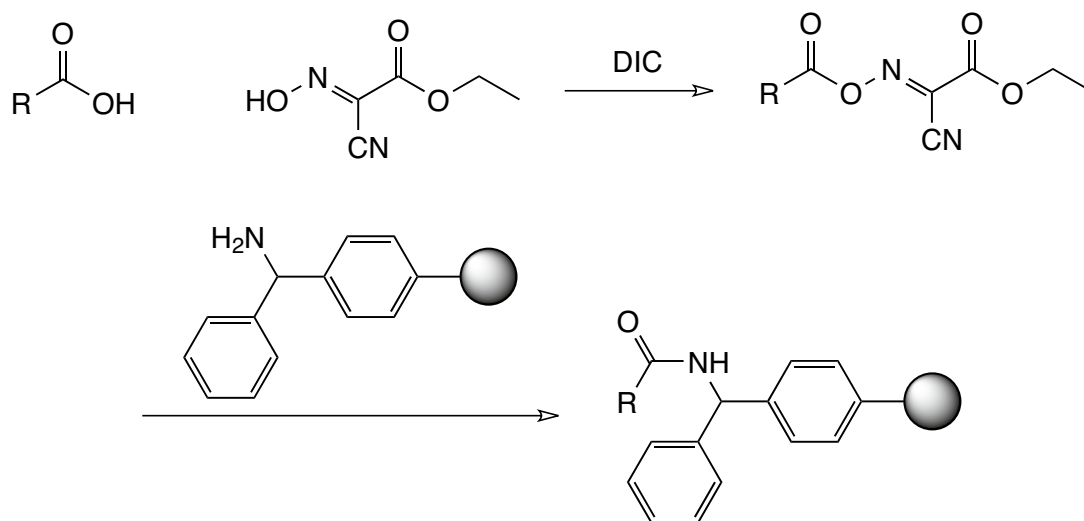
Protocol 3: Attachment of Carboxylic Acids to Aminomethyl Resin

- I. Swell the resin in DMF using 15 mL solvent per gram of resin.
- II. Dissolve 1.5 to 2.5 eq. (relative to the reactive sites on the resin) of carboxylic acid in a separate vessel with a minimum amount of DMF.
- III. Add the same number of equivalents of OxymaPure and dissolve. If necessary add more DMF.
- IV. Add the solution to the resin.
- V. Add 1.0 eq. (relative to the amino acid) of DIC to the container with the resin and close the vessel with a drying tube.
- VI. Shake the solution for 2 to 3 h at room temperature.
- VII. Add 2 eq. (relative to the reactive sites on the resin) of acetic anhydride and pyridine to the mixture and shake for 30 min.
- VIII. Take a small sample of resin, wash with DCM and perform a Kaiser test. If free amines are detected, repeat step VII. with 1 eq. of reagents.
- IX. Remove solution by filtration and wash the resin 3 times with DMF, 3 times with DCM, and finally 3 times with methanol.
- X. Dry resin to constant weight under reduced pressure.



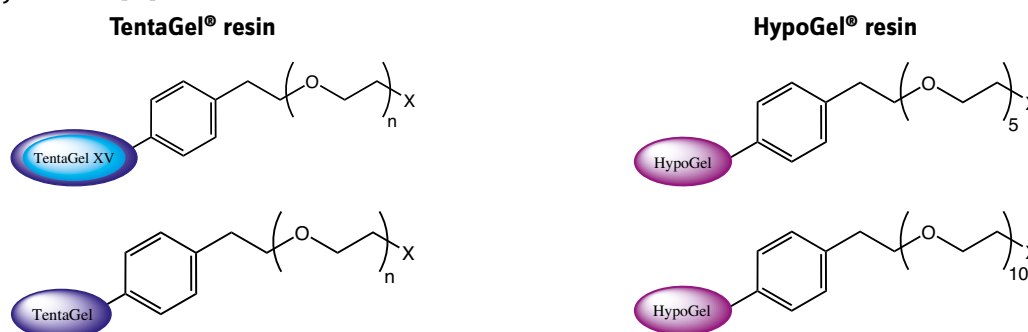
Protocol 4: Attachment of Carboxylic Acids to BHA or MBHA Resin

- I. Swell the resin in 10% (v/v) DIPEA in DCM using 10 mL solution per gram of resin for 15 min in an agitated reactor.
- II. Filter off the solution and wash with DCM.
- III. Add 10 mL of DMF to the resin.
- IV. Dissolve 1.5 to 2.5 eq. (relative to the reactive sites on the resin) of carboxylic acid in another container with a minimum amount of DMF.
- V. Add the same number of equivalents of OxymaPure and dissolve. If necessary add more DMF.
- VI. Add the solution to the resin.
- VII. Put the resin mixture in an ice bath and add 1.0 eq. (relative to the amino acid) of DIC to the resin when the mixture has cooled down. Close the vessel with a drying tube and mix contents by gently moving the vessel.
- VIII. Remove the ice bath and let the mixture warm up to RT.
- IX. Shake the solution for 4 h at RT.
- X. Take a small sample of resin, wash with DCM and perform a Kaiser test. If free amines are detected continue to step XI. Otherwise continue with step XIII.
- XI. Add 2 eq. (relative to the reactive sites on the resin) of acetic anhydride and pyridine to the mixture and shake for 30 min.
- XII. Take a small sample of resin, wash with DCM and perform a Kaiser test. If free amines are detected repeat step XI.
- XIII. Remove solution by filtration and wash the resin 3 times with DMF, 3 times with DCM, and finally 3 times with methanol.
- XIV. Dry resin to constant weight under reduced pressure.



3.4 TentaGel® Resins

TentaGel® resins have been developed for the use in polar solvents which are largely incompatible with the traditional polystyrene resins. Through the attachment of polyethyleneglycol (PEG) chains to the polystyrene core, the swelling behavior, especially in hydrophilic solvents such as water and methanol, is considerably increased (Figure 6) which allows for a broader range of chemistry [33]. Apart from the swelling behavior, the more hydrophilic environment decreases the repulsion of charged organic intermediates formed during reactions. For the base resin, a range of functional groups is available ranging from electrophilic bromine leaving groups [33] to nucleophilic groups like hydroxy [34; 35], amino [36], and carboxy functions [37].



TentaGel S (R and HL) and TentaGel XV are bearing PEG spacers of 3000 Da, while TentaGel XV is less cross-linked, in order to develop higher swelling properties.

HypoGel 200 and HypoGel 400 resins are bearing PEG spacers of 200 (n=5) and 400 Da (n=10) respectively.

For the synthesis of hydrophobic peptides, long peptides and other challenging molecules, it has been demonstrated that an increased swelling volume of the base resin leads to higher yield and purity. In this context, ChemMatrix and TentaGel® XV (XV = extended volume) have been developed and show superior results. The high swelling creates an extended reaction volume which provides the ideal conditions for the synthesis of difficult sequences, aggregating peptides, mini proteins and PNAs in high purities and yields.

The polar PEG spacers allow the composite resin to swell in a wide range of solvents including water, methanol, DMF and DCM, while the handling is still easy and comparable to standard TentaGel resins.

However, a high resin swelling results in a high consumption of solvents. In case increased solubilizing properties are not required, resins with PEG chains shorter than 3000 Da exhibit sufficient solubilizing property with reduced solvent volume consumption. For such purposes, HypoGel 200 and HypoGel 400 have been developed.

Resin/ Solvent	H ₂ O	MeOH	EtOH	DCM	Toluene	DMF	NMP	MeCN	THF	Dioxane	Ether
Polystyrene 1% DVB	-	1.6	1.7	7.5	7.5	4.1	7.0	2.0	7.5	7.0	3.5
TentaGel® S 0.25-0.3 mmol/g	3.6	3.6	2.9	6.3	4.8	4.7	4.9	4.2	5.0	5.4	1.9
HypoGel® 200 0.7-0.9 mmol/g	1.8	2.8	2.6	7.0	5.1	6.0		3.0	6.5	6.4	
HypoGel® 400 0.6-0.8 mmol/g	1.8	2.9	2.8	6.9	5.5	5.2		4.6	5.3	5.6	2.6
TentaGel XV 0.2-0.4 mmol/g	3.6	6.2	2.2	18.0	12.6	13.2	14.4	8.6	13.4	14.2	2.0

Tab. 2: Swelling volume of polystyrene and different PEG grafted polystyrene resins in different solvents

General Procedure for Measurement of Resin Swelling:

To remove soluble by-products and impurities, the resin has to be washed with toluene, DCM, DMF and MeOH (5 times for each solvent) and dried. To 1 g of dry resin solvent is added in a 10-15 ml graduated cylinder, and the resin is mixed with 12-18 ml of solvent. The cylinder is sealed and after 2 h the resin is stirred again to remove all remaining air bubbles and to form a homogenous resin suspension. The cylinder is sealed again and after 22 h of settlement the resin volume is measured [38].

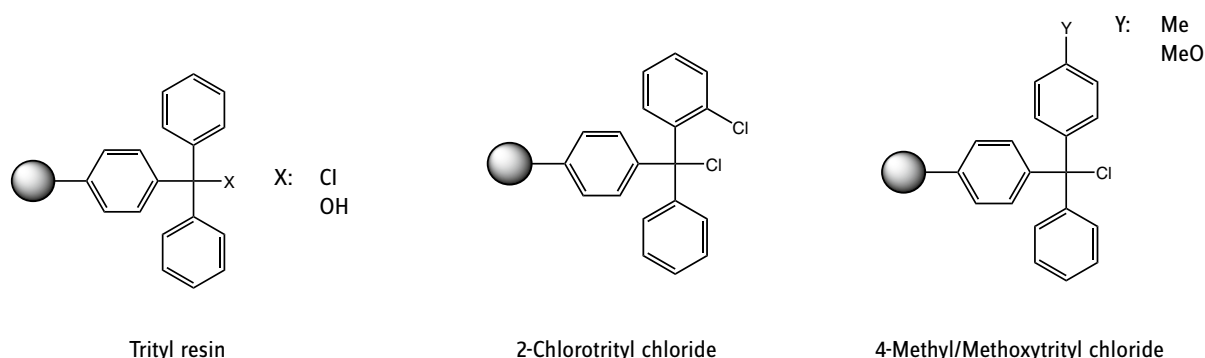
4. Resins and Linkers for the Synthesis of Peptide Acids

The major driver and advantage of using additional linkers attached to a basis resin are the milder cleavage conditions and a greater variety of functional groups, allowing more and advanced synthetic strategies. Depending on the desired swelling properties and reaction conditions the linkers can be combined with any of the aforementioned basic resins and tailored to the intended use.

4.1 Trityl Resins

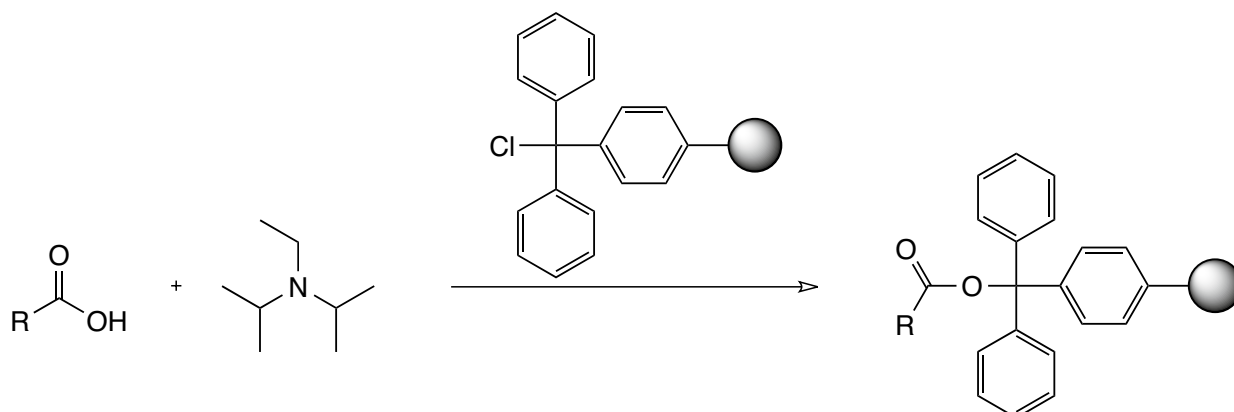
Resins functionalized with trityl linkers are highly acid sensitive, as the three phenyl rings stabilize the benzylic carbocation that is generated during cleavage. These cleavage conditions are so mild that only 1% of TFA is needed, and even less acidic protocols using 20% hexafluoroisopropanol (HFIP) are sufficient to cleave the products from the resin. Peptides can therefore be cleaved from the resin with all side chain protecting groups in place and the N- and C-terminus separately modified e.g. by head-to-tail cyclization or fragment condensation.

Various trityl-based linkers exist with different substitutions on the trityl group that fine-tune the cleavage conditions. The most popular of these in peptide chemistry is the 2-chlorotrityl chloride resin 2-CTC [39; 40; 41]. Especially for the attachment of alcohols, phenols, thiols and amines the 4-Methyltrityl (Mtt), 4-Methoxytrityl (Mmt) and 4,4'-Dimethoxytrityl (Dmt) resins can be employed. Aside from being used as a linker for resins, both the Mtt and Mmt group are also employed for side chain protection of Lys and His. Besides the ready-to-use chloride resin, hydroxyl variants are also available that have to be chlorinated before loading the amino acids.



Those trityl linkers open up new chemical pathways for modifications after the peptide chain has been built up. Besides that the steric demand of the trityl group prevents side reactions with proline or N-alkyl amino acids at the C-terminus. If proline is the first or second amino acid at the C-terminus of a peptide, spontaneous diketopiperazine formation can occur and cleave the peptide from resins. The steric hindrance of trityl linkers is sufficient to prevent this diketopiperazine formation [42; 43].

Moreover, racemization-prone amino acids such as Cys and His can be attached without enantiomerization [39], and the reattachment of Met and Trp residues to the resin during the cleaving procedure is minimized.



Protocol 5: Attachment of Carboxylic Acids to Trityl Chloride Resins [44]

Note: It is important to use dry solvents and reaction containers.

- I. Pre-swell resin in dry DCM (10 mL/g resin) for 15 min
- II. Dissolve 1.2 eq. of carboxylic acid in dry DCM
- III. Add 2.5 eq. of DIEA to the solution. This addition can aid the dissolution of the acid.
- IV. Filter the excess DCM from the resin and add the reaction mixture.
- V. Shake mixture for 1 h at room temperature.
- VI. In order to cap the remaining reactive trityl group, add 1 mL of a solution of methanol and DIEA (5:1; v:v) per gram of resin and agitate the resin for 15 min.
- VII. Discard the reaction solution and wash the resin 5 times with DCM and 3 times with methanol.

VIII. Dry resin to constant weight under reduced pressure.

IX. The loading can be estimated gravimetrically using the formula below:

$$n = \frac{(m_2 - m_1) \cdot 1000}{(MW_{\text{Xaa}} - 36.46) \cdot m_2}$$

n = loading of the resin [mol/g of resin]

m_1 = weight of resin before loading [g]

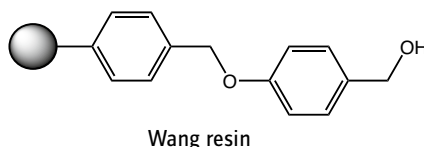
m_2 = weight of resin after loading [g]

MW_{Xaa} = molar weight of attached amino acid [g/mol]

36.46 g/mol is the molecular weight of HCl, which is removed and be replaced by the amino acid

4.2 Wang Resins

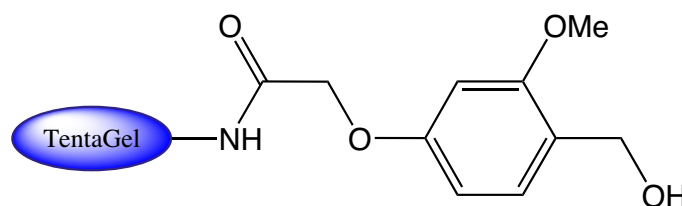
The Wang resin might at first glance look very similar to the original Merrifield resin, but the cleavage conditions are significantly milder (50% (v/v) TFA in DCM) due to the alkoxy group of the *para* alkoxybenzyl alcohol linker [45; 46]. These mild cleavage conditions have made the Wang resin popular not only in the peptide field, but also among organic chemists in general, as it can also be used to attach e.g. phenols and alcohols [47; 48; 49].



To load the Wang resin with carboxylic acids, protocol 2 can be employed.

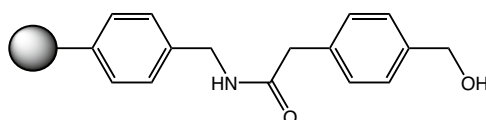
4.3 AC Resin

The 4-hydroxymethyl-3-methoxyphenoxyacetic (AC; sometimes also MHMPA) linker is even more acid labile than the Wang resin due to an additional methoxy group on the aromatic ring. The peptide acid can be cleaved from the resin with 1% TFA while all the side-chain protecting groups are retained [50].



4.4 PAM Resin

The 4-Hydroxymethyl-phenylacetamidomethyl functionalized PAM resin is widely used in Boc-chemistry, as it is more stable towards acids and allows the synthesis of medium-sized to large peptides [51; 52; 53].

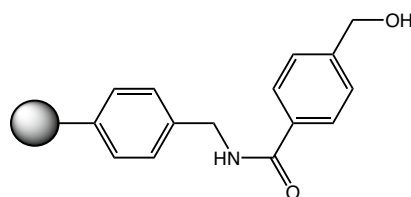


PAM resin

Protocol 2 is suitable to load carboxylic acids on the PAM resin, and cleavage is achieved similar to the Merrifield resin.

4.5 HMBA Resin

Resins with hydroxymethylbenzoic acid (HMBA) linkers are regarded as one of the most versatile solid supports for SPPS [54]. HMBA linkers are attached to amine base resins and are stable to acidic cleaving conditions. In contrast to the other resins and linkers highlighted before, the cleavage from the resin is achieved by a range of nucleophiles, thus various C-terminal modifications such as alcohols, methyl esters, hydrazides or amides can be synthesized.



HMBA resin

Similar to Wang and PAM resins, protocol 2 can be used to load carboxylic acids to the HMBA resin.

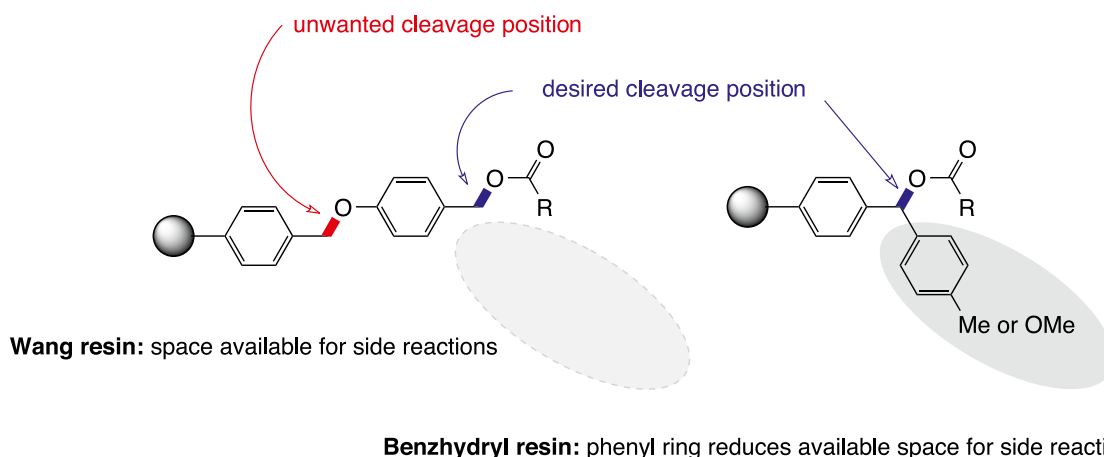
4.6 Benzhydryl Resins

Using the *p*-Hydroxybenzyl linker (Wang linker) is one of the most frequently applied methodologies to prepare peptides with C-terminal carboxylic acid functions. However, many side reactions have meanwhile been discovered that challenge synthetic chemists to find appropriate purification methods.

During final treatment, concentrated TFA cleaves the peptide not only at the carboxyl function (the desired position), but also at the phenoxy group, resulting in the formation of unwanted peptide esters. Additionally, alkylation of certain side chains, such as Trp or Tyr may occur. These impurities may be difficult to separate from the desired product [55; 56; 57; 58; 59].

Another common type of side reaction observed during peptide synthesis on Wang resin is the formation of diketopiperazines by the amino acids on position 1 and 2 of the C-terminus. It becomes a major issue if Pro, Gly or any N α -methylated amino acids are located on position 1, whereas Lys or amino acids with NH₂-bearing side chains are present on position 2 (Lys, Orn, Dab or Dap). A typical side reaction observed when Cys is present at the first position of the C-terminus is the substitution of the thiol group by piperidine during Fmoc removal, leading to the formation of 2-(1-piperidyl)alanine [60].

Consequently, the final yield may be significantly reduced during peptide synthesis on Wang resin, which affects the cost/efficiency balance in commercial productions. Therefore, new types of resins, like 2-chlorotrityl resin, where such side reactions are excluded by the design of resin and linker, are increasingly becoming the preferred choice of solid support for peptide synthesis.



Another alternative type of solid support that is less prone to side reactions than Wang-resins are benzhydryl-based resins. As there is no phenoxy group present, no related side reactions leading to benzyl esters or peptides with alkylated residues can occur. In case of 4-methylbenzhydryl resin, an additional tolyl group is placed as residue. As this does not contribute much to the stability of the resulting carbocation produced during cleavage, conditions are similar to the cleavage conditions typically applied for Wang resin. At least 25% of TFA in DCM with scavengers will liberate the peptide from the resin at room temperature within 30 min.

In case a more acid sensitive resin is required, for example for the production of protected peptide fragments, typically 2-chlorotrityl resin is being used. However, if the sterical hindrance becomes too high, 4-methoxybenzhydryl resin can be used as an alternative [61; 62].

Protocol 6: Attachment of Carboxylic Acids to 4-Methylbenzhydryl Resin [63; 64]

Note: It is important to use anhydrous solvents and dry reaction vessels.

- I. Weigh out 1 mmol of 4-methylbenzhydryl bromide resin in a flask.
- II. Add DCM and let the resin swell for 15 to 20 min.
- III. Filter and wash the resin with DCM.
- IV. Weigh 2 mmol of carboxylic acid, 2 mmol of CsI, 4 mmol DIPEA and add DMF. Let the mixture stand until the solution becomes clear.
- V. Add the mixture to the swollen resin and let it react for 14 h at 20°C to 25°C.
- VI. Add MeOH and shake for 2 h.
- VII. Filter off the resin and wash 6 times with DMF and 4 times with DCM.

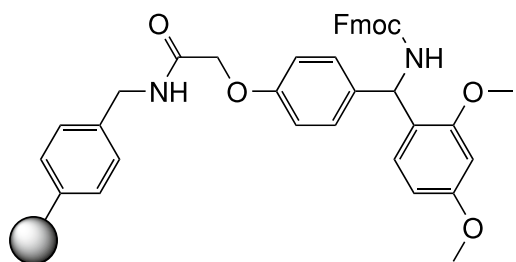
5. Resins and Linkers for the Synthesis of Peptide Amides

5.1. Rink Amide and Knorr Resins

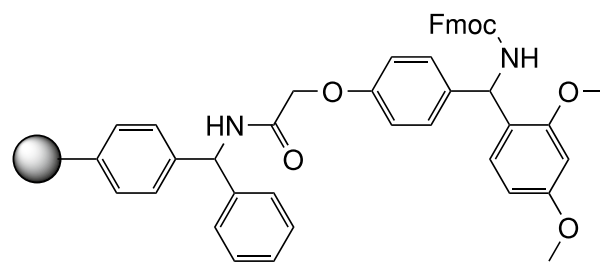
C-Terminal amides are the most common modification in peptides. For their synthesis *via* the Fmoc strategy the Rink amide linker has been developed [65; 66]. The amino group of the Rink linker for amide synthesis is protected with Fmoc (see below), while the corresponding Rink acid linker bears a hydroxyl group instead of the amine (not shown).

Different modifications of the Rink linker have been developed towards varying uses. The standard Rink amide resin is cleaved in 10% TFA in DCM, as higher concentrations of acid can cleave the Rink linker from the polystyrene resin, producing highly colored impurities. The formation of these byproducts can be minimized by adding trialkylsilanes to the cleavage mixture. The Knorr resin avoids this unwanted linker cleavage through the introduction of a more stable acetamide spacer between the Rink linker and the resin [67].

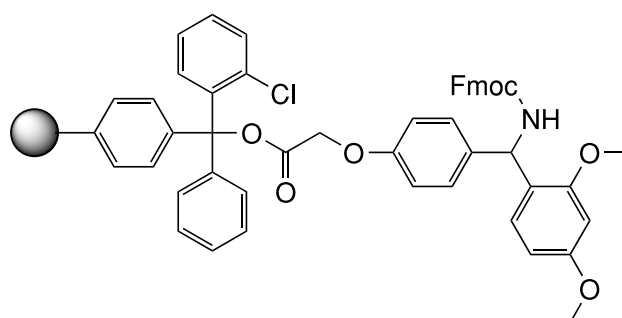
An additional variant of the Knorr linker is the attachment to an even more acid labile 2CT resin. Through this combination, the protected peptide can be cleaved from the 2CT resin while still carrying the Knorr linker as protecting group for the C-terminus for subsequent modifications using solution phase chemistry. This strategy can be especially useful for synthesizing large peptides *via* ligation that have difficult sequences in the C-terminal region.



Rink amide resin

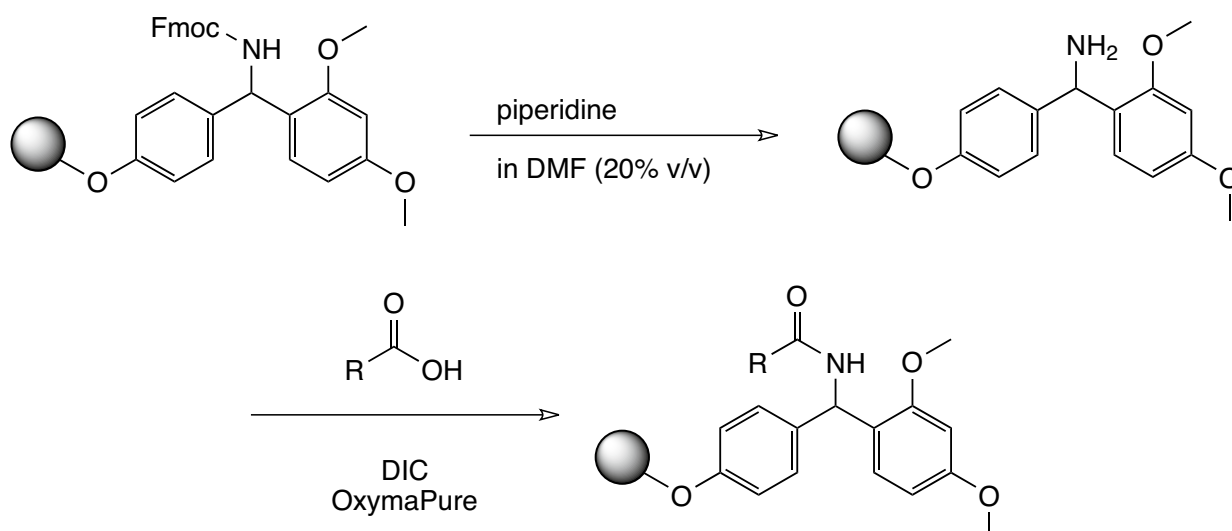


Rink MBHA resin



Rink-2-chlorotrityl resin

Loading amino acids to the Rink amide resins is essentially the same reaction sequence as for standard peptide coupling, with a Fmoc deprotection step followed by the coupling reaction.

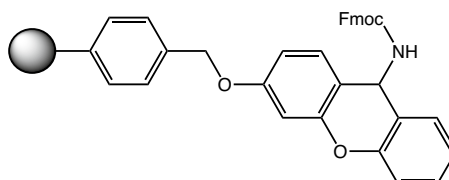


Protocol 7: Attachment of Carboxylic Acids to Rink Amide Linker Resins

- I. Swell the resin in DMF using 15 mL solvent per gram of resin.
- II. Discard excess liquid and deprotect Fmoc group from the linker with 15 mL of 20% (v/v) piperidine in DMF for 10 min.
- III. Repeat step II with 5 min reaction time.
- IV. Discard the piperidine solution and wash 5 times with DMF.
- V. Dissolve 1.5 to 2.5 eq. (relative to the reactive sites on the resin) of carboxylic acid in a second vessel with a minimum amount of DMF.
- VI. Add the same number of equivalents of OxymaPure and dissolve. If necessary add more DMF.
- VII. Add 1.0 eq. (relative to the amino acid) of DIC to the vessel with the amino-acid/OxymaPure solution and close the vessel with a drying tube. Let the solution stand at RT for 10 min.
- VIII. Add the reaction solution to the resin.
- IX. Shake the solution for 2 to 3 h at room temperature.
- X. Take a small sample of resin, wash with DCM and perform a Kaiser test. If free amines are detected, continue with step XI, otherwise with step XII.
- XI. Add 1 eq. (relative to the reactive sites on the resin) of acetic anhydride and pyridine to the mixture and shake for 30 min.
- XII. Remove solution by filtration and wash the resin 3 times with DMF, 3 times with DCM, and finally 3 times with methanol.
- XIII. Dry resin to constant weight under reduced pressure.

5.2 Sieber Resin

The Sieber amide resin is ideally suited to synthesize side-chain protected peptide amides, as cleavage occurs in 1% TFA in DCM [68]. Since the Sieber linker is less bulky through the fixation of the two aryl rings *via* the phenolether bridge, it is better suited for the synthesis of C-terminal secondary amides [69].



Sieber amide resin

A protocol similar to the Rink amide resin loading protocol No. 6 (chapter 5.1) can be employed to attach the first amino acid to the solid support.

5.3 Peptide Amides Synthesis by Side Chain Immobilization

As an alternative to using linker chemistry to generate C-terminal amides, if the first amino acid to be attached to the solid support bears a side chain with a suitable functional group (such as an OH-group), the carboxamide of this amino acid can be attached to the resin *via* its side chain. The peptide chain can then be extended through standard SPPS to generate the desired peptide amide (Figure 8). Many amino acids and peptides as well as preloaded resins are commercially available for fast and easy access.

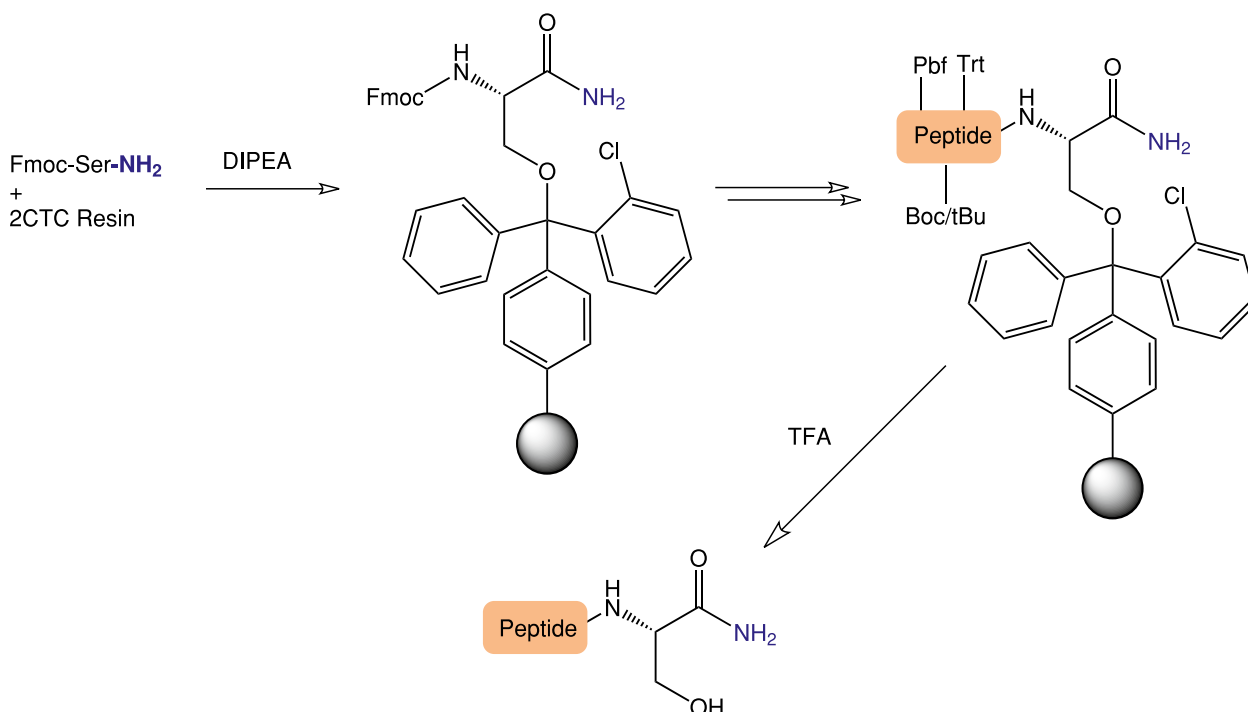


Fig. 8: Example of an alternative way of synthesizing peptide amides by attaching a peptide amide *via* the side chain to the solid support which can subsequently be extended by SPPS.

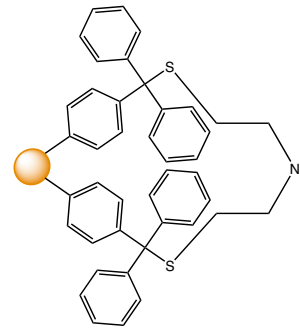
6. Resins for the Synthesis of Peptide Thio Esters

6.1. SEA Resins

Additionally to the peptide acids and amides the corresponding thio esters are becoming increasingly important, especially for the native chemical ligation to synthesize large peptides by fragment condensation.

Peptide thio esters can be conveniently generated by using the bis(2-Sulfanylethyl)amino (SEA) linker on a trityl resin [70; 71; 72; 73].

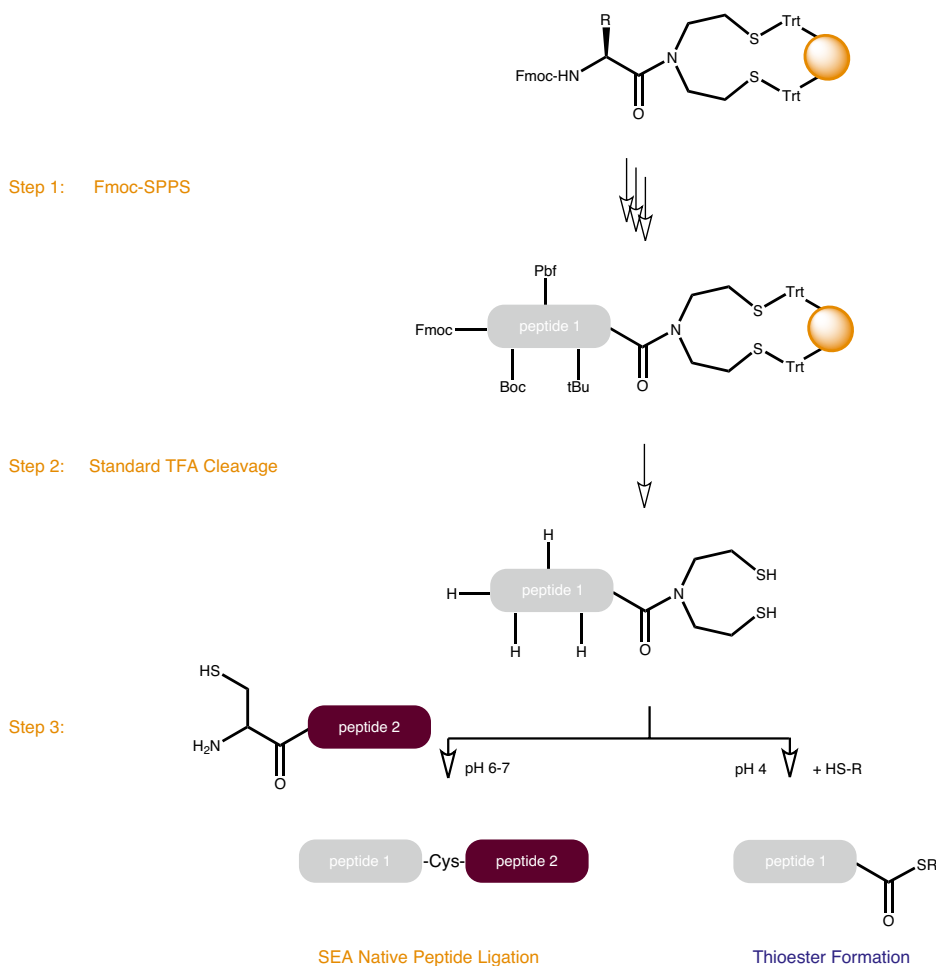
The thioester is generated after synthesizing the peptide on the SEA resin by cleaving it with TFA. An intermediary compound with disulfide cycle can be isolated and stored and activated *in situ* when needed.



SEA resin

SEA Resin [**SEA** = bis(2-Sulfanyl**E**thyl)**A**mino] is an innovative solid support offering a vast array of tools for efficient synthesis of long peptides through consecutive different ligation technologies performed in a one-pot assembly.

- ✓ SEA resin is an innovative solid support offering a vast array of tools for efficient synthesis of long peptides.
- ✓ SEA resin yields SEA peptides which can be ligated directly with Cys peptides using SEA native peptide ligation.
- ✓ SEA resin gives easy access to peptide thioesters and thus implies convenient synthesis of long peptides through Native Chemical Ligation (NCL).



Principles:

1. The first amino acid should be loaded onto SEA resin using HATU activation. Alternatively, preloaded SEA resins are available loaded with all 20 proteinogenic amino acids. The peptide can then be designed applying conventional Fmoc/*t*Bu protocols for batch solid phase peptide synthesis (1st step). For Cys within the sequence Fmoc-Cys(S-*t*Bu)-OH (FAA1575) should be used.

Protocol SEA 1: Protocol 1: Loading SEA Resin

- | | |
|---|--|
| <p>I. Pre-swell the resin (0.1 mmol) in DCM for 60 min and wash with DMF.</p> <p>II. Rapidly dissolve the Fmoc amino acid (1 mmol), the activator HATU (1 mmol) and DIPEA (3 mmol) in DMF (2 mL) and immediately add to the beads. Gently agitate for 2 h. Wash with DCM.</p> | <p>III. Cap the resin twice with Ac₂O/DIPEA/DCM (10:5:85) for 2 min and then wash with DCM for 20 minutes.</p> <p>IV. Check loading by measuring the UV-absorption of the dibenzofulvene- piperidine adduct following treatment with 20% (v/v) piperidine in DMF.</p> |
|---|--|

2. Standard cleavage conditions remove the peptide from the resin including all side chain protecting groups and yield in an unprotected peptide with only the SEA group on the C-terminus (2nd step). At this point, the SEA-peptide can either be used directly for thioester formation and ligation procedures, or be purified.

3. Now SEA native peptide ligation can proceed with a second peptide fragment containing N-terminal Cys in water at neutral pH. However, in the presence of any thiol in water and at low pH, the SEA moiety is easily displaced by the thiol to give the corresponding thioester peptide (3rd step).

Protocol SEA 2: Peptide Synthesis with SEA Resin

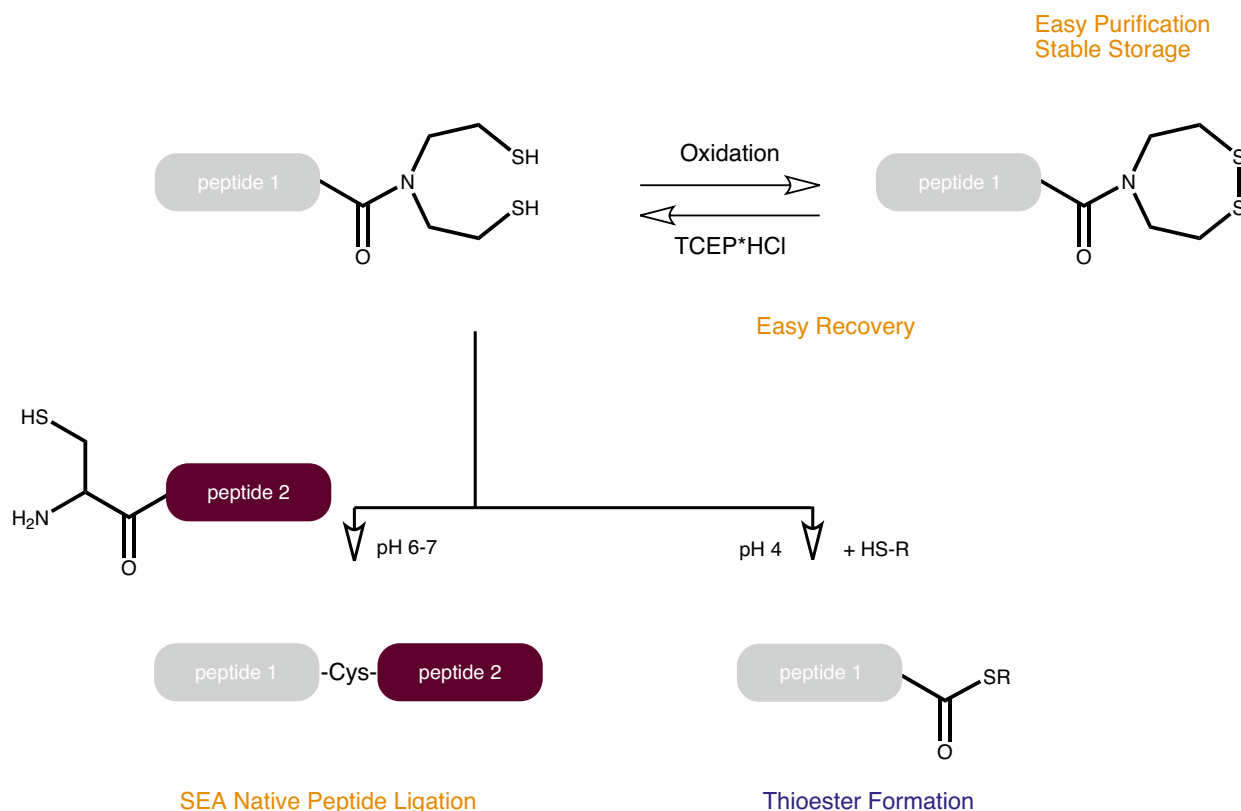
- | | |
|--|---|
| <p>I. Wash the resin with DCM and diethyl ether. Dry the resin <i>in vacuo</i>.</p> <p>II. Chain elongation is performed using standard HBTU/DIPEA conditions in any peptide synthesizer.
NB: For any internal Cys use Fmoc-Cys(S-<i>t</i>Bu)-OH as building block.</p> <p>III. Cleave the peptide with 10 mL TFA/TIS/DMF/ thioanisole/water (90:2.5:2.5:2.5:2.5) for 3 h.</p> <p>IV. Dissolve iodine (0.2 mmol) in 100 mL of DMSO.</p> | <p>V. Dissolve the peptide in AcOH/water (1:4). Add the iodine solution and agitate gently for 30 s. Add dithiothreitol (DTT) (0.1 mmol) to quench the excess of iodine.
NB: Cys(S-<i>t</i>Bu) and oxidized SEA linker are unaffected by DTT treatment, because DTT is unable to reduce disulfides at low pH. Other residues such as methionine or tryptophan are not affected during this short exposure of iodine.</p> <p>VI. Purify immediately by RP-HPLC.</p> |
|--|---|

Protocol SEA 3: Natural Chemical Ligation with SEA Peptide Fragments

- | | |
|---|---|
| <p>I. Dissolve oxidized SEA peptide (1 eq.) and N-terminal Cys-peptide (1.5 eq.) under inert atmosphere in a closed tube containing degassed ligation buffer (0.1 M phosphate buffer, 0.2 M 4-mercaptophenylacetic acid (MPAA), 0.2 M TCEP·HCl, pH 7.4). The final concentration of the peptides should be approximately 3-5 mM. Heat the mixture at 37°C under inert atmosphere.</p> | <p>II. Monitor the progress of the reaction by HPLC. For this, aliquots are acidified by addition of 10% aqueous TFA and extracted with diethyl ether to remove excess MPAA.</p> <p>III. After completion, acidify the mixture with 10% aqueous TFA, extract twice with diethyl ether and purify by standard procedure.</p> |
|---|---|

The outstanding advantage of SEA peptides:

Following cleavage, the SEA moiety can be oxidized under mild conditions (iodine) forming a stable 1,2,5-dithiazepan ring. At this stage, the oxidized SEA-peptide can very easily be purified, characterized, stored or used for other purposes. Standard protocols are available!

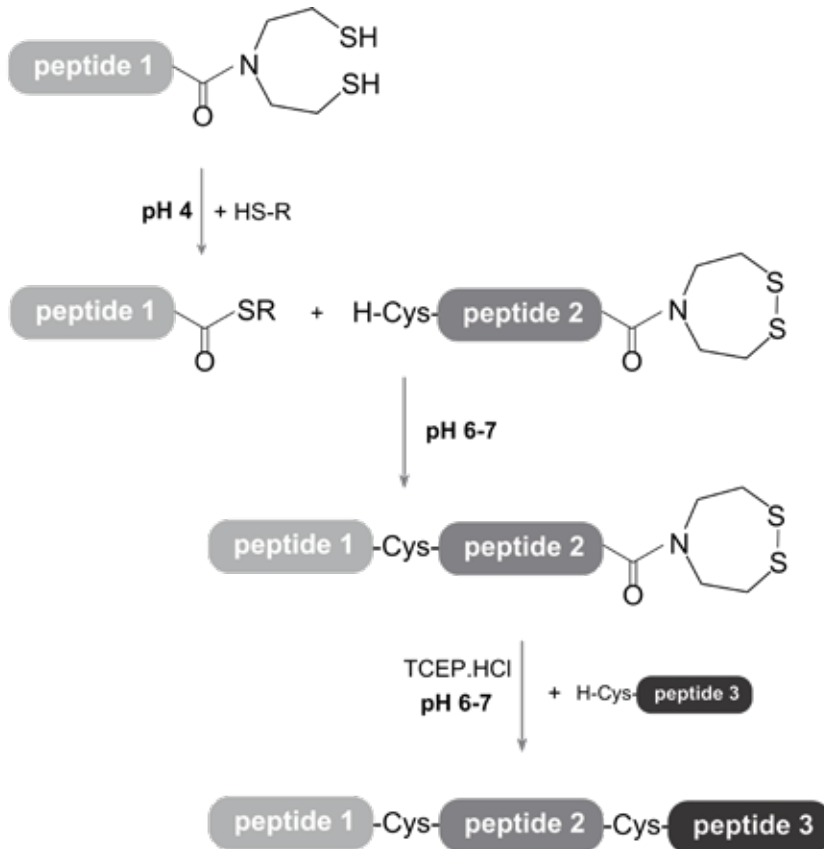


To reactivate the SEA-peptide the 1,2,5-dithiazepan ring can be opened reductively under very mild conditions with TCEP·HCl and simultaneously conjugated with an N-terminal cysteinyl-peptide or thiols forming a ligation peptide or thioester, respectively [74; 75; 76; 77; 78].

Protocol SEA 4: Synthesis of Peptide Thioesters

- I. Dissolve oxidized SEA peptide (1 eq.) under inert atmosphere in a closed tube containing degassed 0.1 M phosphate buffer, 0.2 M TCEP·HCl and 5% 3-mercaptopropionic acid (by vol.) at pH 4. The final concentration of the peptide should be approximately 1-5 mM. Agitate gently and heat the mixture at 37°C under inert atmosphere.
- II. Monitor the progress of the reaction by HPLC. For this, aliquots are acidified by addition of 10% aqueous TFA and extracted with diethyl ether to remove excess MPA.
- III. After completion - usually after 24 h - acidify the mixture with 10% aqueous TFA, extract twice with diethyl ether and purify by standard procedure.

By utilizing the SEA-technology, a one-pot three-segment ligation strategy is possible to assemble three fragments without intermediate isolation and purification.



IRNCIIGKGRSYKGTVSITKSGIK **C**QPWSSMIPHEHSFLPSSYRGKDLQENY **C**RNPRGEEGGPWCFTSNPEVRYEVC **D**IPQCSEV

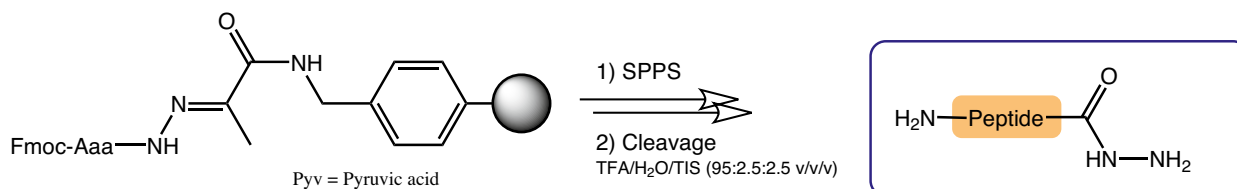
Folding

IRNCIIGKGRSYKGTVSITKSGIK **C**QPWSSMIPHEHSFLPSSYRGKDLQENY **C**RNPRGEEGGPWCFTSNPEVRYEVC **D**IPQCSEV

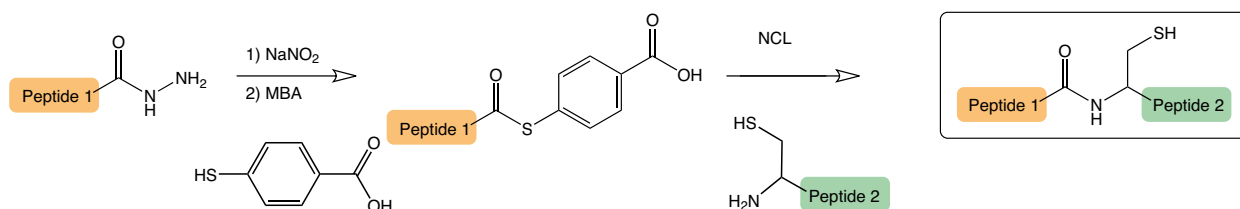


6.2 Hydrazone Resins

Peptide hydrazides can be easily synthesized using the novel hydrazone resin. The hydrazone linker is completely stable in the course of standard Fmoc SPPS, and tolerates treatment with 5% TFA/DCM, thus permitting selective removal of Mtt or similar acid-labile protecting groups. Subsequent application of tried and tested cleavage cocktails (TFA:water:TIS 95:2.5:2.5) permits to obtain the peptides in good yields and purity [79].



Synthesized peptide hydrazides can be applied as building blocks for the conjugation to different carrier molecules using the hydrazone ligation technique, or converted to peptide thioesters which may be used in native chemical ligation (NCL).



Protocol 8: Attachment of Carboxylic Acid to Hydrazone Resin

Note: It is important to use anhydrous solvents and a dry reaction vessel.

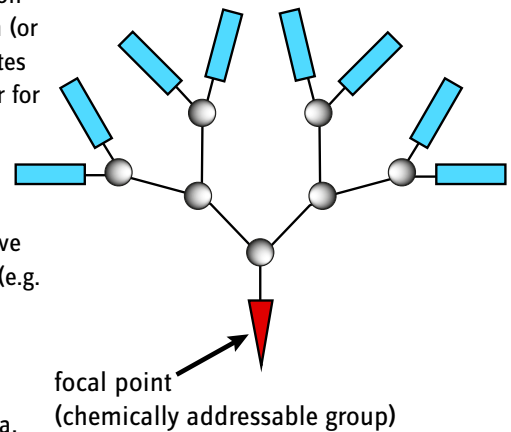
- I. Weigh out 1 eq. of Fmoc-hydrazone-pyruvyl-amino methylpolystyrene resin in a flask.
- II. Swell the resin in DMF using 10 mL of solvent per gram of resin.
- III. Remove solvent by filtration and deprotect Fmoc group by adding 10 mL of 20% (v/v) piperidine in DMF per gram of resin and agitate for 2 min [an alternative deprotection cocktail is 1% DBU/ 1% Pip (v/v) in DMF].
- IV. Repeat step III with 8 min reaction time.
- V. Remove the piperidine solution by filtration and wash 5 times with DMF.
- VI. Weigh out 3 eq. (relative to resin loading) of carboxylic acid in a container and dissolve in minimal volume of DMF.
- VII. Add 1 eq. of HCTU (relative to the carboxylic acid) and 2 eq. of DIEA to the vessel with the acid solution, and mix for 8 min.
- VIII. Add the mixture to the swollen resin and shake it for 20 h at 20 °C to 25 °C.
- IX. Remove solution by filtration and wash the resin 3 times with DMF.
- X. Perform a Kaiser test. In the case of positive test (blue or violet color) repeat from step VI.

Lysine Dendrons - easily accessible via Hydrazone Resin

Lysine dendrons with a hydrazide functional group at the focal point/C-terminus can undergo chemoselective conjugation with synthetic or natural polymers or molecules bearing aldehyde groups (in peptides for example by oxidation of N-terminal Ser or Thr residues). The conjugation can be performed with (or without) subsequent reduction of the hydrazone bond by NaBH₄. Conjugates then can for example be applied for the design of gene delivery systems or for modifying the surface properties of polymers.

DOTA-functionalized dendrons conjugated to peptide or polymer carrier molecules facilitate delivery of paramagnetic ions (Gd³⁺; Mn²⁺) or radioactive isotopes. Applications include the targeted delivery of MR contrast agents (e.g. Gd³⁺) and radio immunotherapy.

The triphenylphosphonium (TPP)-bearing dendron was designed for the targeted delivery of peptides, polymers and different drugs to mitochondria.



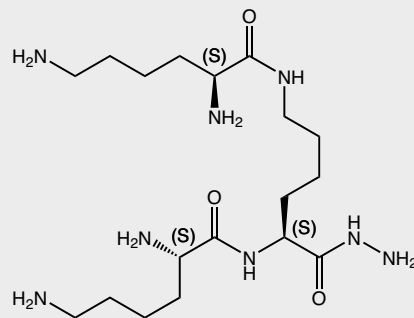
(Lys)₂-Lys-N₂H₃*5TFA LS-3620

(N-alpha-N-epsilon-Bis-lysyl)lysyl-hydrazide pentakistrifluoroacetate

FORMULA C₁₈H₄₀N₈O₃*5 CF₃CO₂H
MOL. WEIGHT 416,56*570,10 g/mol

Article No.	Quantity	Price
LS-3620.0050	50 mg	250,00
LS-3620.0250	250 mg	550,00
LS-3620.1000	1 g	1250,00

SYNONYMS (2S,2'S)-N,N'-((S)-6-hydrazinyl-6-oxohexane-1,5-diyl)bis(2,6-diaminohexanamide) pentakistrifluoroacetate



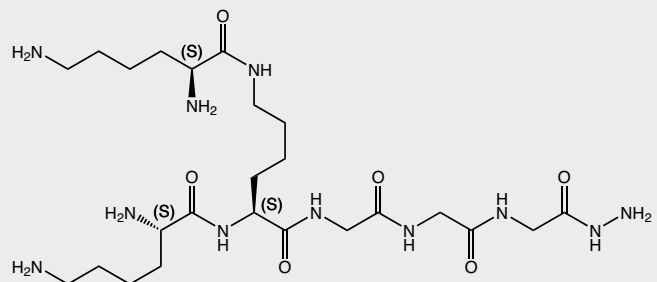
(Lys)₂-Lys-Gly-Gly-Gly-N₂H₃*5TFA LS-3610

(N-alpha-N-epsilon-Bis-lysyl)lysyl-glycyl-glycyl-glycyl-hydrazide pentakistrifluoroacetate

FORMULA C₂₄H₄₉N₁₁O₆*5CF₃CO₂H
MOL. WEIGHT 587,72*570,10 g/mol

Article No.	Quantity	Price
LS-3610.0050	50 mg	275,00
LS-3610.0250	250 mg	600,00
LS-3610.1000	1 g	1450,00

SYNONYMS (2S,2'S)-N,N'-((S)-6-(2-(2-(2-hydrazinyl-2-oxoethylamino)-2-oxoethylamino)-2-oxoethylamino)-6-oxohexane-1,5-diyl)bis(2,6-diaminohexanamide) pentakistrifluoroacetate



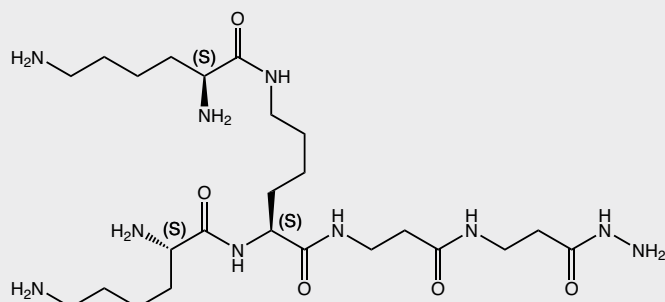
(Lys)₂-Lys-beta-Ala-beta-Ala-N₂H₃*5TFA LS-3630

(N-alpha-N-epsilon-Bis-lysyl)lysyl-beta-alanyl-beta-alanyl-hydrazide pentakistrifluoroacetate

FORMULA C₂₄H₅₀N₁₀O₅*5CF₃CO₂H
MOL. WEIGHT 558,72*570,10 g/mol

Article No.	Quantity	Price
LS-3630.0050	50 mg	275,00
LS-3630.0250	250 mg	600,00
LS-3630.1000	1 g	1450,00

SYNONYMS (2S,2'S)-N,N'-((S)-6-(3-(3-hydrazinyl-3-oxopropylamino)-3-oxopropylamino)-6-oxohexane-1,5-diyl)bis(2,6-diaminohexanamide) pentakistrifluoroacetate

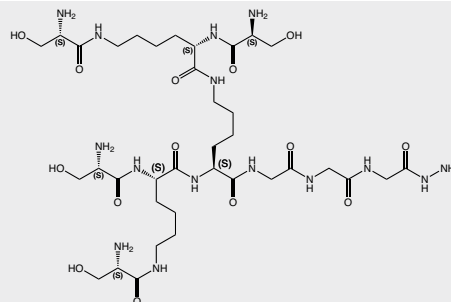


(Ser-Lys(Ser))₂-Lys-Gly-Gly-Gly-N₂H₃*5TFA LS-3640

(N-alpha-N-epsilon-Bis-(di(seryl)lysyl)lysyl-glycyl-glycyl-glycyl-hydrazide pentakistrifluoroacetate

MOL. WEIGHT 935,51*570,10 g/mol

Article No.	Quantity	Price
LS-3640.0050	50 mg	300,00
LS-3640.0250	250 mg	650,00
LS-3640.1000	1 g	1700,00

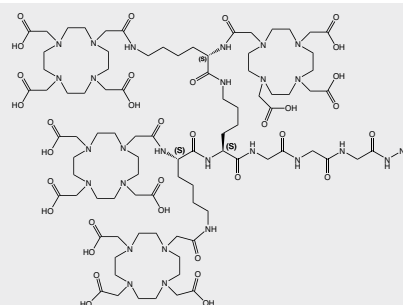
**(DOTA-Lys(DOTA))₂-Lys-Gly-Gly-Gly-N₂H₃*TFA LS-3600**

(N-alpha-N-epsilon-Bis-(di(DOTA)lysyl)lysyl-glycyl-glycyl-glycyl-hydrazide trifluoroacetate

FORMULA C₈₈H₁₅₃N₂₇O₃₄*CF₃CO₂H

MOL. WEIGHT 2132,11*114,02 g/mol

Article No.	Quantity	Price
LS-3600.0250	250 mg	1650,00
LS-3600.1000	1 g	4350,00

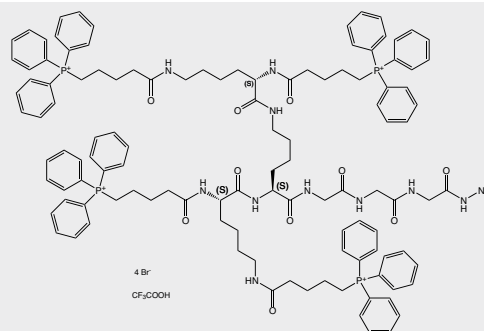
**(TPP-Lys(TPP))₂-Lys-Gly-Gly-Gly-N₂H₃*4Br*TFA LS-3650**

(N-alpha-N-epsilon-Bis-(di(4-carboxybutyltriphenylphosphonium)lysyl)lysyl-glycyl-glycyl-glycyl-hydrazide tetrabromide trifluoroacetate

FORMULA C₁₁₆H₁₃₇N₁₁O₁₀P₄*4Br*CF₃CO₂H

MOL. WEIGHT 1969,29*319,68*114,0 g/mol

Article No.	Quantity	Price
LS-3650.0050	50 mg	350,00
LS-3650.0250	250 mg	750,00
LS-3650.1000	1 g	1900,00



SYNONYMS

(12S,15S,22S)-15-(2-(2-(2-hydrazinyl-2-oxoethylamino)-2-oxoethylamino)-2-oxoethylcarbonyl)-6,13,21,28-tetraoxo-1,11,33,33,33-hexaphenyl-12,22-bis(5-(triphenylphosphonio)pentanami do)-7,14,20,27-tetraaza-1,33-diphosphoniatrtriacontane tetrabromide trifluoroacetate, N-[5-[2,6-bis(5-(triphenyl-lambda₅-phosphanyl)pentanoylamino)hexanoylamino]-6-[[2-[[2-(2-hydrazino-2-oxo-ethyl)amino]-2-oxo-ethyl]amino]-2-oxo-ethyl]amino]-6-oxo-hexyl]-2,6-bis[5-(triphenyl-lambda₅-phosphanyl)pentanoylamino]hexanamide tetrabromide trifluoroacetate

Literature:

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- Effect of the Conjugation Density of Triphenylphosphonium Cation on the Mitochondrial Targeting of Poly(amidoamine) Dendrimers; E. R. Bielski, Q. Zhong, M. Brown and S. R. P. da Rocha; *Molecular pharmaceutics* 2015; 12: 3043-3053. doi:10.1021/acs.molpharmaceut.5b00320
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Prices are in EUR, net, exw Germany

7. Scavenger Resins

In contrast to the solid supports previously discussed, the special resins in this chapter are not used to attach and modify molecules on solid support. Instead, these resins bear immobilized reagents that can be easily filtered off from the products after completion of the desired chemical transformation.

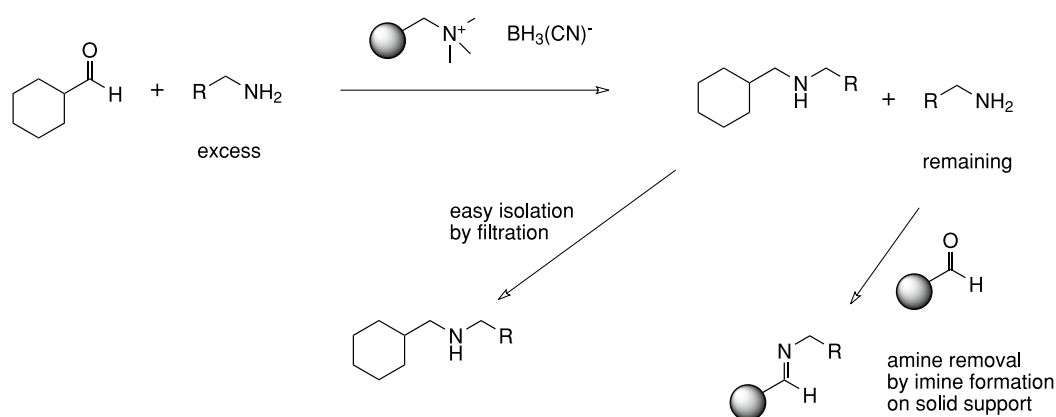
Scavenger resins are functionalized solid supports that are used for the rapid inactivation of reactive side products generated during solution phase chemistry. There is a wide variety of functional groups available on different resins that will react with various by-products to remove them from the reaction solution [80; 81].

Scavenger resins have become increasingly popular in solution phase combinatorial synthesis for active pharmaceutical ingredients [82; 83; 84; 85; 86; 87; 88; 89; 90; 91]. In comparison to other purification methods, scavenger resins have several advantages:

- ▶ Quick purification by easy and fast separation through filtration
- ▶ Can be used in excess to capture impurities more efficiently and faster
- ▶ Product stays in solution and can be subjected to further reactions without prior work-up
- ▶ Compatible with a wide variety of solvents
- ▶ Orthogonal purification principle that can be combined with other methods

Example: Reductive Amination and Excess Amine Removal

The following two-step procedure nicely demonstrates the application of solid-supported reagents and scavenger resins. Reductive amination often requires an excess of amine. The reducing borane reagent is immobilized by ionic interaction on a positively charged ammonium resin that can be easily filtered off once the reduction is completed. The excess of amine can then be removed by imine formation with an aldehyde resin and subsequent filtration.



Aldehyde resins have a significant advantage over other amine scavengers, such as isocyanate resins, as they are fully capable to distinguish between primary and secondary amines.

8. Standard Protocols for Peptide Synthesis

Protocol 9: Fmoc Deprotection (Fmoc Strategy)

- I. Swell the resin in DMF using 10 mL solvent per gram of resin.
- II. Discard excess liquid, and deprotect Fmoc group by adding 10 mL of 20% (v/v) piperidine in DMF per gram of resin, and agitating the resin for 10 min.
- III. Repeat step II with 5 min reaction time.
- IV. Discard the piperidine solution and wash 5 times with DMF.

Protocol 10: Boc Deprotection (Boc Strategy)

- I. Swell the resin in DCM using 10 mL solvent per gram of resin.
- II. Discard excess liquid and deprotect Boc group by adding 10 mL of 50% (v/v) TFA in DCM per gram of resin, and agitating for 5 min. Add 0.5% DTT when Cys, Met or Trp are present in the peptide.
- III. Repeat step II with 20 min reaction time.
- IV. Discard the TFA solution and wash 2 times with DCM and subsequently 2 times with IPA before neutralization.

Protocol 11: Neutralization after Boc Deprotection (Boc Strategy)

- I. Treat resin with 10 mL of 10% (v/v) TEA in DCM per gram resin for 10 min.
- II. Discard liquid and repeat step I.
- III. Wash the resin 3 times alternatingly with DCM and IPA each.

Protocol 12: Standard Amino Acid Coupling

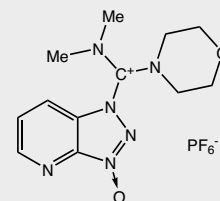
- I. Dissolve 2 eq. (relative to resin loading) of carboxylic acid, COMU and OxymaPure in a vessel with 10 mL of DMF per gram of resin.
- II. Add 1.0 eq. (relative to the amino acid) of DIEA to the vessel with the amino-acid solution and mix.
- III. Add the reaction solution to the swollen resin and shake the solution for 1 h at room temperature.
- IV. Remove solution by filtration and wash the resin 5 times with DMF.

Protocol 13: Difficult Amino Acid Coupling

Numerous protocols have been published for achieving good yields while coupling sterically hindered amino acids, such as Aib or other difficult carboxylic acids using reagents like HATU and/or HOAt. These reagents recently have been classified as explosives and hence cannot be used anymore by the peptide community. Modern substitutes are:

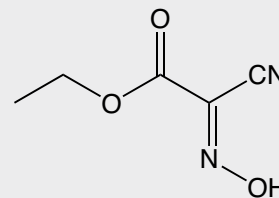
Substitute for HATU:

HDMA	RL-2170		
1-[(Dimethylamino)(morpholino)methylene]-1H-[1,2,3]triazolo[4,5-b]pyridine-1-ium 3-oxide hexafluorophosphate	RL-2170.0025	25 g	95,00
	RL-2170.0100	100 g	250,00
	RL-2170.0500	500 g	960,00
	RL-2170.1000	1 kg	1600,00



Substitute for HOAt:

OxymaPure	RL-1180		
Ethyl cyano(hydroxyimino)acetate, Ethyl cyanoglyoxylate-2-oxime	RL-1180.0100	100 g	75,00
	RL-1180.0500	500 g	200,00
	RL-1180.1000	1 kg	350,00



- I. Dissolve 2 eq. (relative to resin loading) of carboxylic acid, HDMA and OxymaPure in a vessel with 10 mL of DMF per gram of resin.
- II. Add 1.0 eq. (relative to the amino acid) of DIPEA to the vessel with the amino-acid solution and mix.
- III. Add the reaction solution to the swollen resin and shake the solution for 3 h at room temperature.
- IV. Remove solution by filtration and wash the resin 5 times with DMF.

Protocol 14: TFA Peptide Cleavage (Fmoc Strategy), high Concentration

- I. Add 20 mL of a TFA, water and TIPS mixture (95/2.5/2.5; v:v:v) to the dry resin and react for 2h.
- II. Separate cleavage cocktail from resin *via* filtration.
- III. Reduce volume of cleavage cocktail to approximately 10% of original volume.
- IV. Add 10 volumes of ice-cold diethyl ether (relative to remaining volume of cleavage cocktail) to precipitate peptide.
- V. Decant diethyl ether or filter off precipitate.
- VI. Wash 2 times with diethyl ether and dry peptide.

Protocol 15: Dilute TFA Peptide Cleavage (Fmoc Strategy)

Fully side chain protected peptides will be generated with highly acid-sensitive resins like 2-chlorotrityl resin, trityl-TentaGel or Sieber resins. Due to the high acid sensitivity of the peptide-resin bond and the hydrophobic nature of the cleaved, fully protected peptide, careful prior experimentation is necessary, and appropriate minor modifications of the protocol given below may be required.

- I. Swell the resin in DCM using 10 mL solvent per gram of resin and discard excess of liquid.
- II. Add 10 mL of a 1% TFA and 1% EDT in DCM, seal the container and shake for 2 min.
- III. Filter solution by applying gravity or nitrogen pressure (no vacuum!) into a flask containing 10% pyridine in MeOH (v/v 2 mL per 10 mL cleavage solution).
- IV. Repeat from step II 10 times.
- V. Wash with 3 x 30 mL DCM, 3 x 30 mL MeOH, 2 x 30 mL DCM, and 3 x 30 mL MeOH (per gram resin). Check filtrates by TLC or HPLC.
- VI. Combine filtrates and reduce volume to approximately 5% to 10% of original volume.
- VII. Add approximately double volume of water and cool the mixture with ice, in order to precipitate peptide.
- VIII. Filtrate precipitate and wash 3 times with water.

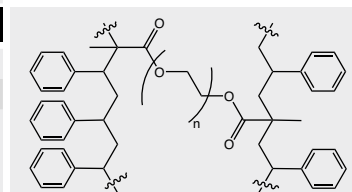
Protocol 16: Low-High HF Peptide Cleavage (Boc Strategy)

- I. A solution of DMS/*p*-cresol (65:10; v/v) (*p*-thiocresol if Trp(For) is present) is added to the reactor with the resin.
- II. Distill HF into the reactor until the solution reaches a HF/DMS/*p*-cresol ratio of 25:65:10 (v/v/v) with 10 mL solution per gram resin.
- III. Agitate for 2 h at 0-5 °C.
- IV. Evaporate HF and DMS under reduced pressure.
- V. Remove resin from reactor and wash with DCM.
- VI. Return resin to reactor with *p*-cresol.
- VII. Perform high HF cleavage for 1 h at 0-5 °C in a mixture of HF/*p*-cresol of 9:1 (v/v).
- VIII. Remove HF under reduced pressure.
- IX. Suspend the cleaved peptide and resin in diethyl ether and wash thoroughly with diethyl ether.
- X. Remove ether by drying.
- XI. Dissolve peptide in 50% aqueous acetic acid, filter off resin and dilute peptide solution with water.
- XII. Recover peptide by lyophilization or use solution directly for HPLC purification.

9. Product Catalogue

9.1. Base Resins

	Article No.	Quantity	Price
Polystyrene (PEG crosslinked)			BR-5240
Polystyrene (PEG crosslinked)	BR-5240.0005	5 g	200,00
PARTICLE SIZE 100-200 mesh	BR-5240.0025	25 g	800,00
CROSSLINKING PEG Crossl			

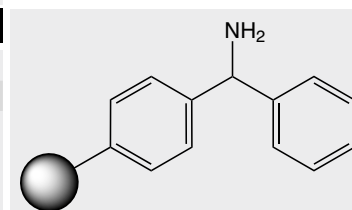


Interested in Polystyrene?

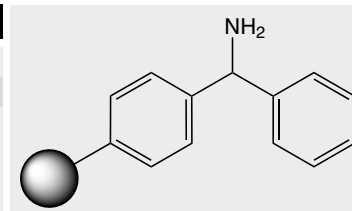
Contact us with required quantity and cross-linking!

9.1.1. Benzhydryl Type Base Resins

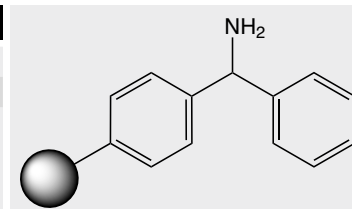
	Article No.	Quantity	Price
BHA-Resin			BR-5226
Benzhydrylamine resin	BR-5226.0005	5 g	65,00
LOADING 0.1-0.4 mmol/g	BR-5226.0025	25 g	200,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



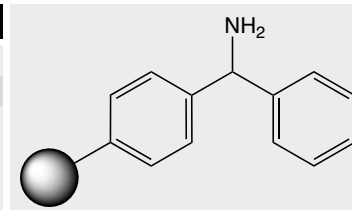
	Article No.	Quantity	Price
BHA-Resin			BR-5227
Benzhydrylamine resin	BR-5227.0005	5 g	50,00
LOADING 0.5-1.5 mmol/g	BR-5227.0025	25 g	150,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



	Article No.	Quantity	Price
BHA-Resin			BR-5229
Benzhydrylamine resin	BR-5229.0005	5 g	65,00
LOADING 0.1-0.4 mmol/g	BR-5229.0025	25 g	200,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



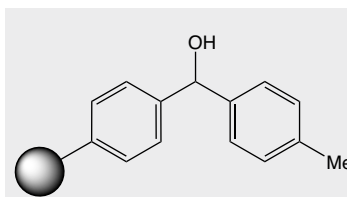
	Article No.	Quantity	Price
BHA-Resin			BR-5230
Benzhydrylamine resin	BR-5230.0005	5 g	50,00
LOADING 0.5-1.5 mmol/g	BR-5230.0025	25 g	150,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



	Article No.	Quantity	Price	
BH-OH Resin				BR-5202
Benzhydryl alcohol polystyrene	BR-5202.0005	5 g	95,00	
LOADING 0.5-2.0 mmol/g	BR-5202.0025	25 g	250,00	
PARTICLE SIZE 100-200 mesh	BR-5202.0100	100 g	750,00	
CROSSLINKING 1% DVB				
BH-OH Resin				BR-5203
Benzhydryl alcohol polystyrene	BR-5203.0005	5 g	75,00	
LOADING 2.1-4.0 mmol/g	BR-5203.0025	25 g	180,00	
PARTICLE SIZE 100-200 mesh	BR-5203.0100	100 g	525,00	
CROSSLINKING 1% DVB				
MBHA-Resin				BR-1120
4-Methylbenzhydrylamine resin	BR-1120.0025	25 g	90,00	
LOADING 0.5-1.5 mmol/g	BR-1120.0100	100 g	200,00	
PARTICLE SIZE 100-200 mesh	BR-1120.0250	250 g	450,00	
CROSSLINKING 1% DVB	BR-1120.1000	1 kg	1270,00	
SYNONYMS	Amino-(4-methylphenyl)methyl polystyrene (1% DVB, 100-200 mesh, 0.5-1.5 mmol/g)			
MBHA-Resin				BR-1125
4-Methylbenzhydrylamine resin	BR-1125.0100	100 g	280,00	
LOADING 0.5-1.5 mmol/g	BR-1125.0250	250 g	560,00	
PARTICLE SIZE 200-400 mesh	BR-1125.1000	1 kg	1480,00	
CROSSLINKING 1% DVB				
SYNONYMS	Amino-(4-methylphenyl)methyl polystyrene (1% DVB, 200-400 mesh, 0.5-1.5 mmol/g)			
4-Me-BH-Br Resin				BR-1180
4-Methylbenzhydryl bromide resin	BR-1180.0025	25 g	85,00	
LOADING 1.2-2.0 mmol/g	BR-1180.0100	100 g	175,00	
PARTICLE SIZE 100-200 mesh	BR-1180.0500	500 g	675,00	
CROSSLINKING 1% DVB	BR-1180.1000	1 kg	1250,00	
SYNONYMS	Bromo-(4-methylphenyl)methyl polystyrene (100-200 mesh, 1.2-2.0 mmol/g)			
4-Me-BH-Br Resin				BR-1185
4-Methylbenzhydryl bromide resin	BR-1185.0025	25 g	85,00	
LOADING 1.2-2.0 mmol/g	BR-1185.0100	100 g	175,00	
PARTICLE SIZE 200-400 mesh	BR-1185.0250	250 g	350,00	
CROSSLINKING 1% DVB	BR-1185.0500	500 g	675,00	
SYNONYMS	Bromo-(4-methylphenyl)methyl polystyrene (200-400 mesh, 1.2-2.0 mmol/g)			
4-Me-BH-OH Resin				BR-1190
4-Methylbenzhydryl alcohol resin	BR-1190.0005	5 g	50,00	
LOADING 1.2-2.0 mmol/g	BR-1190.0025	25 g	200,00	
CROSSLINKING 1% DVB				
SYNONYMS	Hydroxy-(4-methylphenyl)methyl polystyrene			

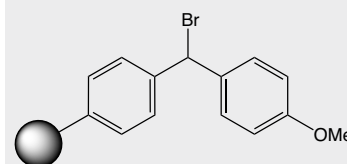
Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price
4-Me-BH-OH Resin BR-1195			
4-Methylbenzhydryl alcohol resin	BR-1195.0005	5 g	50,00
LOADING 1.2-2.0 mmol/g	BR-1195.0025	25 g	200,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



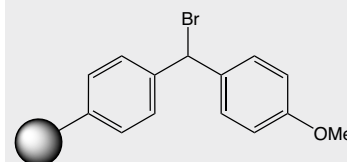
SYNONYMS Hydroxy-(4-methylphenyl)methyl polystyrene

4-MeO-BH-Br Resin BR-1030			
4-Methoxybenzhydryl bromide resin	BR-1030.0025	25 g	140,00
LOADING 1.0-1.7 mmol/g	BR-1030.0100	100 g	450,00
PARTICLE SIZE 100-200 mesh	BR-1030.1000	1 kg	1375,00
CROSSLINKING 1% DVB			



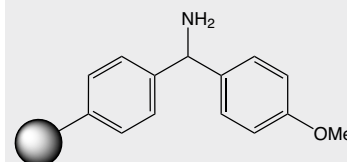
SYNONYMS Bromo-(4-methoxyphenyl)methyl polystyrene

4-MeO-BH-Br Resin BR-1035			
4-Methoxybenzhydryl bromide resin	BR-1035.0025	25 g	140,00
LOADING 1.0-1.7 mmol/g	BR-1035.0100	100 g	450,00
PARTICLE SIZE 200-400 mesh	BR-1035.1000	1 kg	1375,00
CROSSLINKING 1% DVB			



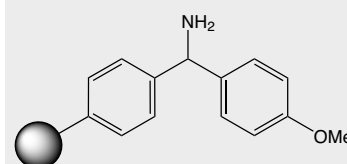
SYNONYMS Bromo-(4-methoxyphenyl)methyl polystyrene

4-MeO-BH-NH₂ Resin BR-1010			
4-Methoxybenzhydryl amine resin	BR-1010.0025	25 g	300,00
LOADING 1.0-1.7 mmol/g	BR-1010.0100	100 g	900,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



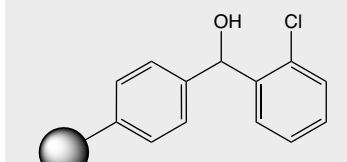
SYNONYMS Amino-(4-methoxyphenyl)methyl polystyrene

4-MeO-BH-NH₂ Resin BR-1015			
4-Methoxybenzhydryl amine resin	BR-1015.0025	25 g	300,00
LOADING 1.0-1.7 mmol/g	BR-1015.0100	100 g	900,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			

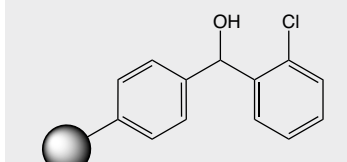


SYNONYMS Amino-(4-methoxyphenyl)methyl polystyrene

2-Cl-BH-OH Resin BR-5200			
2-Chlorobenzhydryl alcohol polystyrene	BR-5200.0025	25 g	200,00
LOADING 1.0-2.0 mmol/g	BR-5200.0100	100 g	600,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



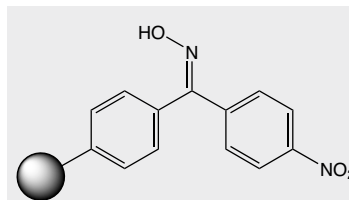
2-Cl-BH-OH Resin BR-5222			
2-Chlorobenzhydryl alcohol polystyrene	BR-5222.0005	5 g	100,00
LOADING 2.1-3.5 mmol/g	BR-5222.0025	25 g	275,00
PARTICLE SIZE 100-200 mesh	BR-5222.0100	100 g	850,00
CROSSLINKING 1% DVB			



	Article No.	Quantity	Price		
Rink Acid Resin			BR-5088		
Rink polystyrene resin	BR-5088.0005	5 g	75,00		
LOADING	0.5-1.3 mmol/g	BR-5088.0025	25 g		250,00
PARTICLE SIZE	100-200 mesh	BR-5088.0100	100 g		800,00
CROSSLINKING	1% DVB				
SYNONYMS	4'-(1-amino-2,4-dimethoxybenzyl)-phenoxy methyl polystyrene				
Benzophenon Resin			BR-1245		
Benzophenon resin	BR-1245.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1245.0025	25 g		200,00
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
4-Me-Benzophenon Resin			BR-1215		
4-Methylbenzophenon resin	BR-1215.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1215.0025	25 g		200,00
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
4-Me-Benzophenon Resin			BR-1220		
4-Methylbenzophenon resin	BR-1220.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1220.0025	25 g		200,00
PARTICLE SIZE	200-400 mesh				
CROSSLINKING	1% DVB				
4-MeO-Benzophenon Resin			BR-1225		
4-Methoxybenzophenon resin	BR-1225.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1225.0025	25 g		200,00
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
4-MeO-Benzophenon Resin			BR-1230		
4-Methoxybenzophenon resin	BR-1230.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1230.0025	25 g		200,00
PARTICLE SIZE	200-400 mesh				
CROSSLINKING	1% DVB				
2-Cl-Benzophenon Resin			BR-1200		
2-Chlorobenzophenon resin	BR-1200.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1200.0025	25 g		200,00
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
2-Cl-Benzophenon Resin			BR-1205		
2-Chlorobenzophenon resin	BR-1205.0005	5 g	50,00		
LOADING	> 1.1 mmol/g	BR-1205.0025	25 g		200,00
PARTICLE SIZE	200-400 mesh				
CROSSLINKING	1% DVB				

Prices are in EUR, net, exw Germany

		Article No.	Quantity	Price
Oxime Resin		BR-5076		
p-Nitrobenzhydryl oxime polystyrene		BR-5076.0005	5 g	90,00
LOADING	0.5-1.5 mmol/g	BR-5076.0025	25 g	325,00
PARTICLE SIZE	100-200 mesh	BR-5076.0100	100 g	950,00
CROSSLINKING	1% DVB			


DESCRIPTION

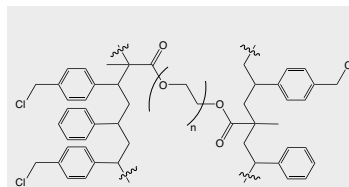
Labile to basic and nucleophilic conditions. Used for convenient preparation of protected fragments, cyclic peptides, and alternative C-terminal groups. Oxime resin is a synthesis resin compatible with Boc chemistry. Substrates can be cleaved from this resin under basic conditions, which leave the side chain and N-terminal protecting groups in place, making this resin very useful for preparing protected fragments that can be used in the segment condensation synthesis of larger substrates. This resin is also useful for preparing structural analogues which differ only at the C-terminus. By using different alkyl amines to displace the substrate from the resin, a series of N-alkylamides of the same substrate can be prepared. Likewise, using DBU and different alcohols a variety of esters can be prepared. Using acetate salts of amino acid esters produces a series of peptide analogues that differ only in the C-terminal amino acid. Although this resin is compatible with Boc chemistry, the oxime ester linkage is susceptible to TFA. Therefore, the Boc group is removed with 25% TFA in DCM during synthesis and end-capping is performed after each coupling to block any active sites on the resin that may have been exposed.

Literature:

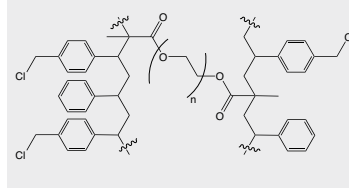
Pichette, A., *et al.*; *Tetrahedron Lett.* 1997; **38**: 1279.
 Lee, B.H. *et al.*; *Tetrahedron Lett.* 1997; **38**: 757.
 Mohan, R.; Chou, Y.-L.; Morrissey, M.M.; *Tetrahedron Lett.* 1996; **37**: 3963.
 Scialdone, M.A.; *Tetrahedron Lett.* 1996; **37**: 8141.
 Carpino, L.A.; El-Faham, A.; *J. Am. Chem. Soc.* 1995; **117**: 5401.
 Nishino, N., *et al.*; *Tetrahedron Lett.* 1992; **33**: 1479.
 Sasaki, T., *et al.*; *J. Org. Chem.* 1991; **56**: 3159.
 DeGrado, W.F.; Kaiser, E.T.; *J. Org. Chem.* 1982; **47**: 3258.
 DeGrado, W.F.; Kaiser, E.T.; *J. Org. Chem.* 1980; **45**: 1295.

9.1.2. Merrifield Type Base Resins

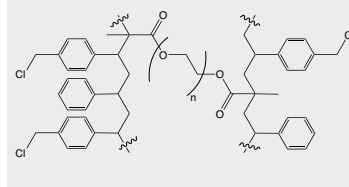
		Article No.	Quantity	Price
Merrifield-PEG Resin		BR-5031		
PEG Crosslinked Chloromethylpolystyrene (n=4)		BR-5031.0005	5 g	90,00
LOADING	0.8-1.5 mmol/g	BR-5031.0025	25 g	350,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	PEG Crosslinked			



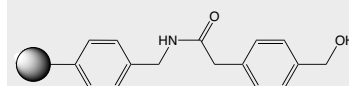
Merrifield-PEG Resin		BR-5032		
PEG Crosslinked Chloromethylpolystyrene (n=9)		BR-5032.0005	5 g	90,00
LOADING	0.8-1.5 mmol/g	BR-5032.0025	25 g	350,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	PEG Crosslinked			



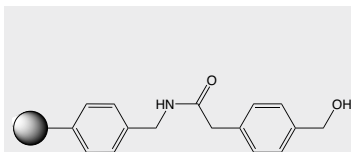
Merrifield-PEG Resin		BR-5030		
PEG Crosslinked Chloromethylpolystyrene (n=16)		BR-5030.0005	5 g	90,00
LOADING	0.8-1.5 mmol/g	BR-5030.0025	25 g	350,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	PEG Crosslinked			



PAM Resin		BR-5239		
p-Hydroxymethylphenylacetamidomethyl polystyrene		BR-5239.0005	5 g	200,00
LOADING	0.1-0.5 mmol/g	BR-5239.0025	25 g	800,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			

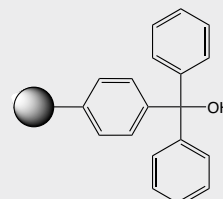


	Article No.	Quantity	Price
PAM Resin			BR-5210
p-Hydroxymethylphenylacetamidomethyl polystyrene	BR-5210.0005	5 g	200,00
LOADING 0.6-1.3 mmol/g	BR-5210.0025	25 g	800,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			

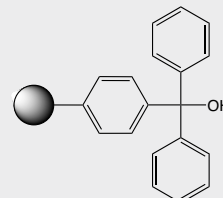


9.1.3. Trityl Type Base Resins

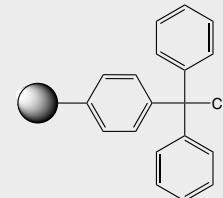
	Article No.	Quantity	Price
Trt-OH Resin			BR-1150
Trityl alcohol resin	BR-1150.0025	25 g	225,00
LOADING 1.2-2.0 mmol/g	BR-1150.0100	100 g	650,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



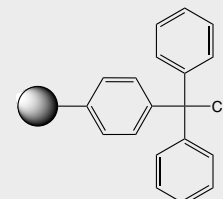
	Article No.	Quantity	Price
Trt-OH Resin			BR-1155
Trityl alcohol resin	BR-1155.0025	25 g	225,00
LOADING 1.2-2.0 mmol/g	BR-1155.0100	100 g	650,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



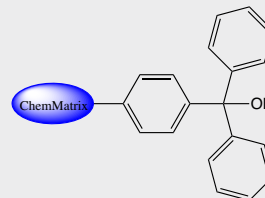
	Article No.	Quantity	Price
Trt-Cl Resin			BR-1140
Trityl chloride resin	BR-1140.0025	25 g	60,00
LOADING 1.0-2.0 mmol/g	BR-1140.0100	100 g	170,00
PARTICLE SIZE 100-200 mesh	BR-1140.1000	1 kg	1270,00
CROSSLINKING 1% DVB			



	Article No.	Quantity	Price
Trt-Cl Resin			BR-1145
Trityl chloride resin	BR-1145.0025	25 g	60,00
LOADING 1.2-2.0 mmol/g	BR-1145.0100	100 g	150,00
PARTICLE SIZE 200-400 mesh	BR-1145.1000	1 kg	1200,00
CROSSLINKING 1% DVB			



	Article No.	Quantity	Price
HO-Trt-ChemMatrix®			CM-7420
Trityl-Alcohol-ChemMatrix Resin	CM-7420.0000		please inquire
LOADING 0.40-0.65 mmol/g			
PARTICLE SIZE 35-100 mesh			



DESCRIPTION

Literature:

Vernieri, E. *et al.*; An optimized Fmoc synthesis of human defensin 5. *Amino Acids* 2014; **46**: 395-400.

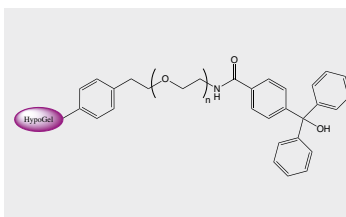
Pawel, Zajdel *et al.*; The pipecolic linker-an acid-labile handle for derivatization of secondary amines on a solid support. Part 3. *Tetrahedron Lett.* 2013; **54(8)**: 998-1002.

Marta Cal *et al.*; Solid phase synthesis of peptide hydroxamic acids on poly(ethylene glycol)-based support. *J. Pept. Sci.* 2012; **19(1)**: 9-15.

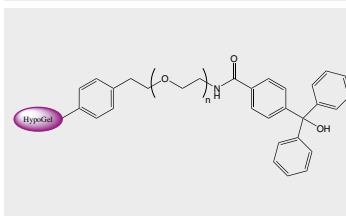
Pipkorn, R. *et al.*; SPPS Resins Impact the PNA-Syntheses' Improvement. *Int. J. Med. Sci.* 2013; **10**: 331-337.

Muttenthaler Markus *et al.*; *J. Am. Chem. Soc.*, 2010; **132(10)**: 3514-3522.

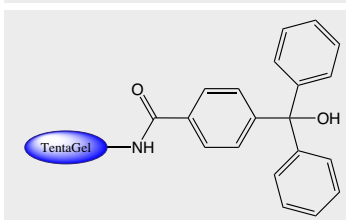
	Article No.	Quantity	Price
HypoGel® 200 Trt-OH		BRH1140	
HypoGel-PEG200-trityl alcohol (n=5)	BRH1140.0005	5 g	160,00
LOADING 0.6-0.8 mmol/g	BRH1140.0025	25 g	600,00
PARTICLE SIZE 110-150 µm	BRH1140.0100	100 g	2140,00



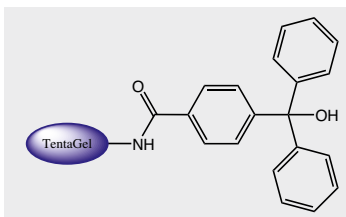
	Article No.	Quantity	Price
HypoGel® 400 Trt-OH		BRH1260	
HypoGel-PEG400-trityl alcohol (n=10)	BRH1260.0005	5 g	160,00
LOADING 0.4-0.6 mmol/g	BRH1260.0025	25 g	600,00
PARTICLE SIZE 110-150 µm	BRH1260.0100	100 g	2140,00



	Article No.	Quantity	Price
TG S Trt-OH (90µm)		S-30012	
TentaGel S Trt-OH	S-30012.0001	1 g	60,00
LOADING 0.2-0.25 mmol/g	S-30012.0005	5 g	180,00
PARTICLE SIZE 90 µm	S-30012.0025	25 g	740,00

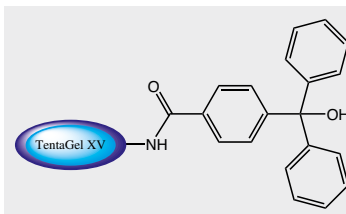


	Article No.	Quantity	Price
TG HL Trt-OH (75µm)		HL12012	
TentaGel HL Trt-OH (75µm)	HL12012.0001	1 g	75,00
LOADING 0.3-0.4 mmol/g	HL12012.0005	5 g	225,00
PARTICLE SIZE 75 µm	HL12012.0025	25 g	950,00
	HL12012.0050	50 g	1475,00



DESCRIPTION Due to its high loading this resin is particularly useful for the synthesis of protected peptide acid fragments. TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 1500 Da to 2000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.

	Article No.	Price
TG XV Trt-OH (100µm)		XV30012
Hydroxytrityl-TentaGel XV	XV30012.0000	please inquire
LOADING 0.2-0.4 mmol/g		
PARTICLE SIZE 100-200 µm		



DESCRIPTION Due to modifications of the polystyrene backbone TentaGel XV shows extended swelling properties providing a large reaction volume. It is a superior resin for synthesizing difficult sequences, aggregating peptides, mini proteins, and PNAs in high purity and excellent yields.

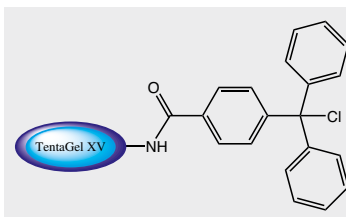
Literature:

R. Pipkorn *et al.*; *Int. J. Med. Sci.* 2013; **10**: 331.

W. Rapp *et al.* in Peptides 2012, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.28.

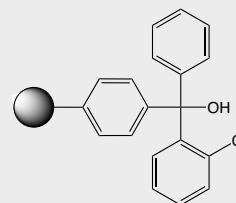
S. Rawer *et al.* in Peptides 2012, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.406.

	Article No.	Price
TG XV Trt-Cl (100µm)		XV30031
Chlorotrityl-TentaGel XV	XV30031.0000	please inquire
LOADING 0.2-0.4 mmol/g		
PARTICLE SIZE 100-200 µm		

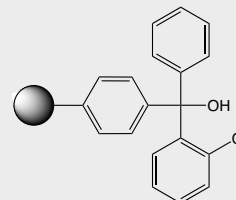


DESCRIPTION This resin will freshly be prepared on order and needs to be used soon after receipt! Please inquire with the quantity required.

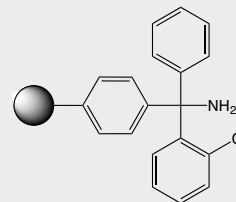
	Article No.	Quantity	Price
2CT-OH Resin BR-1170			
2-Chlorotrityl alcohol resin	BR-1170.0025	25 g	150,00
LOADING 1.2-2.5 mmol/g	BR-1170.0100	100 g	450,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



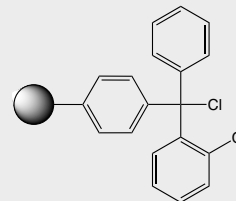
2CT-OH Resin BR-1175			
2-Chlorotrityl alcohol resin	BR-1175.0025	25 g	150,00
LOADING 1.2-2.0 mmol/g	BR-1175.0100	100 g	450,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



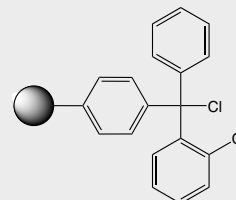
2CT-NH₂ Resin BR-5220			
2-Chlorotrityl amino resin	BR-5220.0005	5 g	225,00
LOADING 1.5-2.5 mmol/g	BR-5220.0025	25 g	900,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



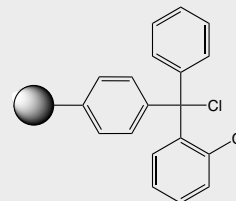
2CTC Resin BR-1055			
2-Chlorotrityl chloride resin	BR-1055.0025	25 g	140,00
CAS-NO 42074-68-0	BR-1055.0100	100 g	375,00
LOADING 1.0-1.6 mmol/g			
PARTICLE SIZE 50-100 mesh			
CROSSLINKING 1% DVB			



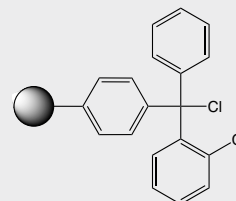
2CTC Resin BR-1060LL			
2-Chlorotrityl chloride resin	BR-1060LL.0005	5 g	150,00
CAS-NO 42074-68-0	BR-1060LL.0025	25 g	500,00
LOADING 1.0-1.6 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



2CTC Resin BR-1060			
2-Chlorotrityl chloride resin	BR-1060.0025	25 g	120,00
CAS-NO 42074-68-0	BR-1060.0100	100 g	230,00
LOADING 1.0-1.6 mmol/g	BR-1060.0250	250 g	450,00
PARTICLE SIZE 100-200 mesh	BR-1060.1000	1 kg	1270,00
CROSSLINKING 1% DVB			



2CTC Resin BR-1065			
2-Chlorotrityl chloride resin	BR-1065.0025	25 g	120,00
CAS-NO 42074-68-0	BR-1065.0100	100 g	230,00
LOADING 1.0-1.6 mmol/g	BR-1065.0250	250 g	450,00
PARTICLE SIZE 200-400 mesh	BR-1065.1000	1 kg	1270,00
CROSSLINKING 1% DVB			



Prices are in EUR, net, exw Germany

2-Chlorotrityl Chloride Resin

A Versatile Resin Available in Ton Lots!

Convergent peptide synthesis

Fmoc/tBu protected peptides, synthesized on a 2-chlorotrityl resin, have been quantitatively esterified by treatment with 2-chlorotrityl chloride and diisopropylethylamine. The obtained peptide chlorotrityl esters were deprotected at the N-function and subsequently condensed in soln. to larger peptides. The chlorotrityl ester function of the obtained products could be selectively removed by treatment with AcOH.

Literature:

Athanassopoulos, Panagiotis; Barlos, Kleomenis; Gatos, Dimitrios; Hatzi, Olga; Tzavara, Chrysoula; *Tetrahedron Letters* 1995; **36(31)**: 5645-8.

Solid phase synthesis of (Leu15)-gastrin I and unsulfated cholecystokinin octapeptide.

The carboxyl terminal dipeptide amide, Fmoc-Asp-Phe-NH₂ of gastrin and cholecystokinin (CCK) has been attached in high yield through its free side chain carboxyl group to the acid-labile 2-chlorotrityl resin. The obtained peptide resin ester has been applied in the solid phase synthesis of partially protected (Leu15)-gastrin I utilizing Fmoc amino acids. Quantitative cleavage of this peptide from resin, with the tBu type side chain protection intact is achieved using mixtures of acetic acid/trifluoroethanol/dichloromethane. Under the same conditions, complete detritylation of the tyrosine phenoxy function occurs simultaneously. Thus, the solid-phase synthesis of peptides selectively deprotected at the side chain of tyrosine is rendered possible by the use of 2-chlorotrityl resin and Fmoc-Tyr(Trt)-OH. The efficiency of this approach has been proved by the subsequent high-yield synthesis of 3 model peptides and CCK octapeptide.

Literature:

Barlos, Kleomenis; Gatos, Dimitrios; Kapalos, Stavros; Poulos, Constantine; Schafer, Wolfram; Yao, Wenqing. *International Journal of Peptide & Protein Research* 1991; **38(6)**: 555-61.

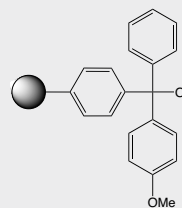
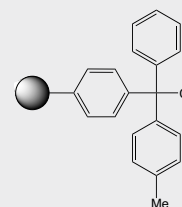
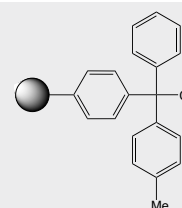
Anchoring of Fmoc-amino acids and peptide cleavage

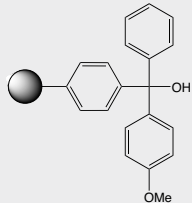
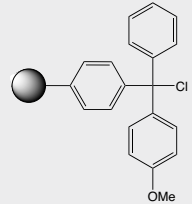
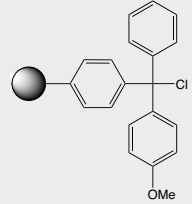
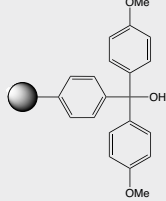
The esterification of 2-chlorotrityl chloride resin with Fmoc-amino acids in the presence of DIPEA is studied under various conditions. High esterification yields are obtained using 0.6 equiv. Fmoc-amino acid/mmol resin in DCM or ClCH₂CH₂Cl in 25 min at room temp. The reaction proceeds without by-product formation even in the case of Fmoc-Asn-OH and Fmoc-Gln-OH. The quantitative and easy cleavage of amino acids and peptides from 2-chlorotrityl resin using AcOH/TFA/DCM mixtures is accomplished within 15-60 min at room temperature while tBu type protecting groups remain unaffected. Under these exceptionally mild conditions, 2-chlorotrityl cations generated during the cleavage of amino acids and peptides from resin do not attack the nucleophilic side chains of tryptophan, methionine, and tyrosine.

Literature:

Barlos, Kleomenis; Chatzi, Olga; Gatos, Dimitrios; Stavropoulos, George. *International Journal of Peptide & Protein Research* 1991; **37(6)**: 513-20.

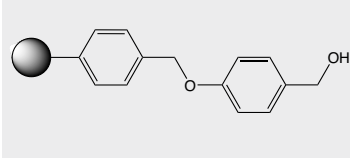
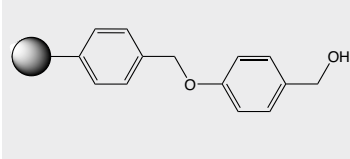
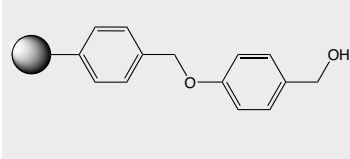
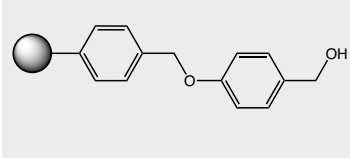
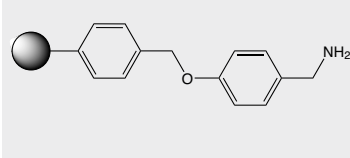
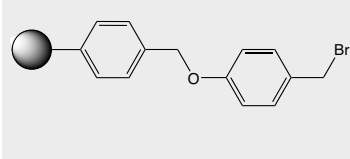
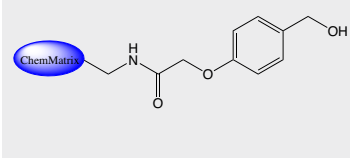
	Article No.	Quantity	Price
Mtt-Cl Resin BR-1130			
4-Methyltrityl chloride resin	BR-1130.0025	25 g	120,00
LOADING 0.5-2.0 mmol/g	BR-1130.0100	100 g	300,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			
Mtt-Cl Resin BR-1135			
4-Methyltrityl chloride resin	BR-1135.0025	25 g	100,00
LOADING 0.5-2.0 mmol/g	BR-1135.0100	100 g	300,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			
Mmt-OH Resin BR-1160			
4-Methoxytrityl alcohol resin	BR-1160.0025	25 g	180,00
LOADING 1.2-2.0 mmol/g	BR-1160.0100	100 g	550,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			

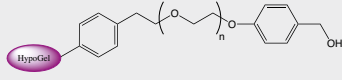
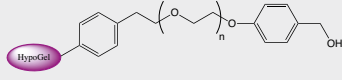
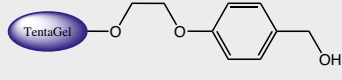
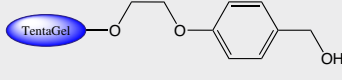
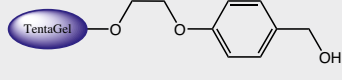
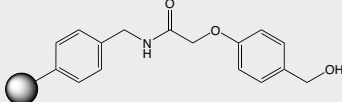
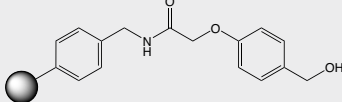


	Article No.	Quantity	Price		
Mmt-OH Resin			BR-1165		
4-Methoxytrityl alcohol resin	BR-1165.0025	25 g	180,00		
LOADING	BR-1165.0100	100 g	550,00		
PARTICLE SIZE	1.2-2.0 mmol/g				
CROSSLINKING	200-400 mesh				
	1% DVB				
Mmt-Cl Resin			BR-1110		
4-Methoxytrityl chloride resin	BR-1110.0025	25 g	100,00		
LOADING	BR-1110.0100	100 g	300,00		
PARTICLE SIZE	1.0-2.0 mmol/g				
CROSSLINKING	100-200 mesh				
	1% DVB				
Mmt-Cl Resin			BR-1115		
4-Methoxytrityl chloride resin	BR-1115.0025	25 g	120,00		
LOADING	BR-1115.0100	100 g	340,00		
PARTICLE SIZE	1.2-2.0 mmol/g				
CROSSLINKING	200-400 mesh				
	1% DVB				
Dmt-OH Resin			BR-5063		
4,4'-Dimethoxytrityl alcohol resin	BR-5063.0005	5 g	225,00		
PARTICLE SIZE	BR-5063.0025	25 g	900,00		
CROSSLINKING	100-200 mesh				
	1% DVB				

Prices are in EUR, net, exw Germany

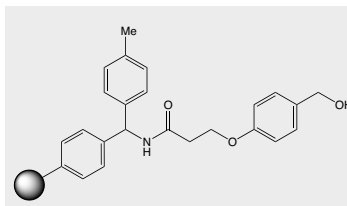
9.1.4. Wang and other Benzylalcohol Basis Resins

	Article No.	Quantity	Price	
Wang Resin				BR-5098
4-Benzyloxybenzyl alcohol polystyrene	BR-5098.0025	25 g	95,00	
CAS-NO 201058-08-4	BR-5098.0100	100 g	250,00	
LOADING 0.4-1.0 mmol/g	BR-5098.0250	250 g	500,00	
PARTICLE SIZE 100-200 mesh	BR-5098.1000	1 kg	1500,00	
CROSSLINKING 1% DVB				
Wang Resin				BR-5244
4-Benzyloxybenzyl alcohol polystyrene	BR-5244.0025	25 g	95,00	
CAS-NO 201058-08-4	BR-5244.0100	100 g	295,00	
LOADING 1.0-2.0 mmol/g	BR-5244.0250	250 g	590,00	
PARTICLE SIZE 100-200 mesh	BR-5244.1000	1 kg	1750,00	
CROSSLINKING 1% DVB				
Wang Resin				BR-5245
4-Benzyloxybenzyl alcohol polystyrene	BR-5245.0025	25 g	95,00	
CAS-NO 201058-08-4	BR-5245.0100	100 g	250,00	
LOADING 0.4-1.0 mmol/g	BR-5245.0250	250 g	500,00	
PARTICLE SIZE 200-400 mesh	BR-5245.1000	1 kg	1500,00	
CROSSLINKING 1% DVB				
Wang Resin				BR-1420
4-Benzyloxybenzyl alcohol polystyrene	BR-1420.0025	25 g	100,00	
CAS-NO 201058-08-4	BR-1420.0100	100 g	295,00	
LOADING 1.0-2.0 mmol/g	BR-1420.0250	250 g	590,00	
PARTICLE SIZE 200-400 mesh	BR-1420.1000	1 kg	1750,00	
CROSSLINKING 1% DVB				
Wang-amide Resin				BR-5106
4-Benzyloxybenzyl amine polystyrene	BR-5106.0005	5 g	90,00	
LOADING 0.5-1.3 mmol/g	BR-5106.0025	25 g	275,00	
PARTICLE SIZE 100-200 mesh	BR-5106.0100	100 g	825,00	
CROSSLINKING 1% DVB				
Wang-Br Resin				BR-5216
4-Benzyloxybenzyl bromide polystyrene	BR-5216.0005	5 g	75,00	
LOADING 0.5-1.3 mmol/g	BR-5216.0025	25 g	200,00	
PARTICLE SIZE 100-200 mesh	BR-5216.0100	100 g	600,00	
CROSSLINKING 1% DVB				
Wang-ChemMatrix®				CM-7320
4-Hydroxymethylphenoxyacetyl amide-ChemMatrix® Resin	CM-7320.0001	1 g	100,00	
LOADING 0.40-0.65 mmol/g	CM-7320.0005	5 g	300,00	
PARTICLE SIZE 100-200 mesh	CM-7320.0025	25 g	1200,00	
	CM-7320.0100	100 g	3600,00	

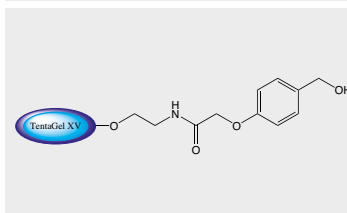
	Article No.	Quantity	Price	
HypoGel@ 200 Wang				BRH1150
HypoGel-PEG200-p-Hydroxybenzyl alcohol (n=5)	BRH1150.0005	5 g	110,00	
LOADING 0.6-0.8 mmol/g	BRH1150.0025	25 g	410,00	
PARTICLE SIZE 110-150 µm	BRH1150.0100	100 g	1440,00	
HypoGel@ 400 Wang				BRH1270
HypoGel-PEG400-p-Hydroxybenzyl alcohol (n=10)	BRH1270.0005	5 g	110,00	
LOADING 0.4-0.6 mmol/g	BRH1270.0025	25 g	410,00	
PARTICLE SIZE 110-150 µm	BRH1270.0100	100 g	1440,00	
TG R Wang (90µm)				R28013
TentaGel R PHB (90µm)	R28013.0001	1 g	60,00	
LOADING 0.18-0.23 mmol/g	R28013.0005	5 g	125,00	
PARTICLE SIZE 90 µm	R28013.0025	25 g	450,00	
	R28013.0050	50 g	750,00	
SYNONYMS	TentaGel R resin-4-hydroxybenzylalcohol, TentaGel R Wang resin			
TG S Wang (90µm)				S-30013
TentaGel S PHB	S-30013.0005	5 g	100,00	
LOADING 0.2-0.25 mmol/g	S-30013.0025	25 g	390,00	
PARTICLE SIZE 90 µm	S-30013.0100	100 g	1150,00	
SYNONYMS	TentaGel S resin-4-hydroxybenzylalcohol, TentaGel S Wang resin			
TG HL Wang (75µm)				HL12013
TentaGel HL PHB (75µm)	HL12013.0001	1 g	75,00	
LOADING 0.3-0.4 mmol/g	HL12013.0005	5 g	160,00	
PARTICLE SIZE 75 µm	HL12013.0025	25 g	575,00	
SYNONYMS	TentaGel R resin-4-hydroxybenzylalcohol, TentaGel R Wang resin			
HMPA Resin				BR-5068
4-(Hydroxymethyl)phenoxyacetyl amidomethylpolystyrene resin	BR-5068.0005	5 g	90,00	
LOADING 0.8-1.2 mmol/g	BR-5068.0025	25 g	330,00	
PARTICLE SIZE 100-200 mesh	BR-5068.0100	100 g	1190,00	
CROSSLINKING 1% DVB				
HMPA Resin				BR-5250
4-(Hydroxymethyl)phenoxyacetyl amidomethylpolystyrene resin	BR-5250.0005	5 g	90,00	
LOADING 0.8-1.2 mmol/g	BR-5250.0025	25 g	330,00	
PARTICLE SIZE 200-400 mesh	BR-5250.0100	100 g	1190,00	
CROSSLINKING 1% DVB				

Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price
HMPPA-MBHA Resin			BR-5069
(4-Hydroxymethyl)phenoxypropionic acid-4-methylbenzhydramide resin	BR-5069.0005	5 g	125,00
	BR-5069.0025	25 g	500,00
LOADING	0.7-1.3 mmol/g		
PARTICLE SIZE	100-200 mesh		
CROSSLINKING	1% DVB		



	Article No.	Quantity	Price
TG XV HMPA (100µm)			XV30015
4-Hydroxymethyl-phenoxyacetamido-TentaGel XV	XV30015.0001	1 g	80,00
	XV30015.0005	5 g	190,00
	XV30015.0025	25 g	560,00
LOADING	0.2-0.4 mmol/g		
PARTICLE SIZE	100-200 µm		


DESCRIPTION

Due to modifications of the polystyrene backbone TentaGel XV shows extended swelling properties providing a large reaction volume. It is a superior resin for synthesizing difficult sequences, aggregating peptides, mini proteins, and PNAs in high purity and excellent yields.

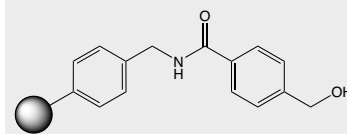
Literature:

R. Pipkorn *et al.*; *Int. J. Med. Sci.* 2013; **10**: 331.

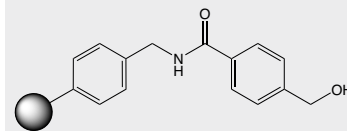
W. Rapp *et al.* in *Peptides 2012*, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.28.

S. Rawer *et al.* in *Peptides 2012*, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.406.

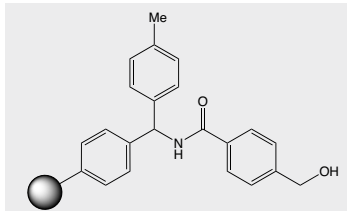
	Article No.	Quantity	Price
HMBA-AM Resin			BR-5066
4-(Hydroxymethyl)benzoyl-aminomethyl polystyrene	BR-5066.0005	5 g	80,00
	BR-5066.0025	25 g	310,00
	BR-5066.0100	100 g	1100,00
LOADING	0.6-1.0 mmol/g		
PARTICLE SIZE	100-200 mesh		
CROSSLINKING	1% DVB		



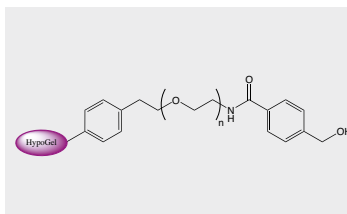
	Article No.	Quantity	Price
HMBA-AM Resin			BR-5249
4-(Hydroxymethyl)benzoyl-aminomethyl polystyrene	BR-5249.0005	5 g	80,00
	BR-5249.0025	25 g	310,00
	BR-5249.0100	100 g	1100,00
LOADING	0.8-1.2 mmol/g		
PARTICLE SIZE	200-400 mesh		
CROSSLINKING	1% DVB		



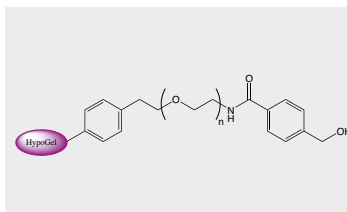
	Article No.	Quantity	Price
HMBA-MBHA Resin			BR-5207
4-(Hydroxymethyl)benzoyl-4-methylbenzhydramide resin	BR-5207.0005	5 g	125,00
	BR-5207.0025	25 g	425,00
LOADING	0.7-1.3 mmol/g		
PARTICLE SIZE	100-200 mesh		
CROSSLINKING	1% DVB		



	Article No.	Quantity	Price
HypoGel® 200 HMBA			BRH1100
Hydroxymethylbenzoylamid-PEG200-HypoGel (n=5)	BRH1100.0005	5 g	160,00
	BRH1100.0025	25 g	630,00
	BRH1100.0100	100 g	2230,00
LOADING	0.6-0.8 mmol/g		
PARTICLE SIZE	110-150 µm		

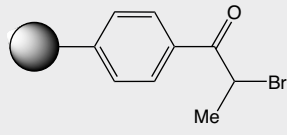
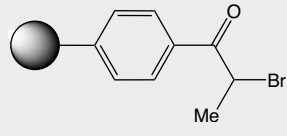
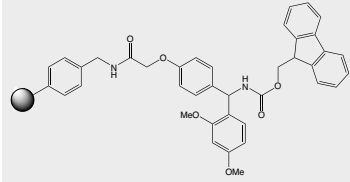
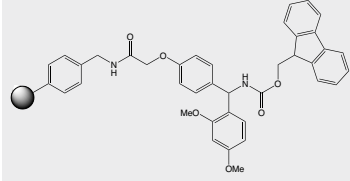
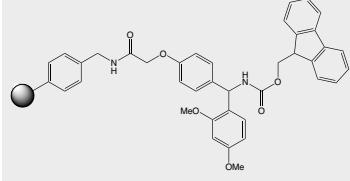
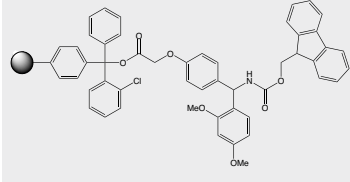
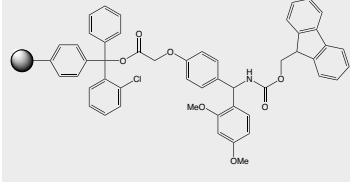


	Article No.	Quantity	Price
HypoGel® 400 HMBA			BRH1220
Hydroxymethylbenzoylamid-PEG400-HypoGel (n=10)	BRH1220.0005	5 g	160,00
	BRH1220.0025	25 g	630,00
	BRH1220.0100	100 g	2230,00
LOADING	0.4-0.6 mmol/g		
PARTICLE SIZE	110-150 µm		



	Article No.	Quantity	Price	
TG R HMBA (90µm)			R28014	
TentaGel R 4-(hydroxymethyl)benzoyl amide	R28014.0001	1 g	85,00	
LOADING 0.18-0.22 mmol/g	R28014.0005	5 g	225,00	
PARTICLE SIZE 90 µm	R28014.0025	25 g	925,00	
	R28014.0050	50 g	1450,00	
TG S HMBA (90µm)			S-30014	
TentaGel S 4-(hydroxymethyl)benzoyl amide	S-30014.0001	1 g	60,00	
LOADING 0.2-0.28 mmol/g	S-30014.0005	5 g	160,00	
PARTICLE SIZE 90 µm	S-30014.0025	25 g	630,00	
TG HL HMBA (75µm)			HL12014	
TentaGel HL 4-(hydroxymethyl)benzoyl amide	HL12014.0001	1 g	85,00	
LOADING 0.3-0.4 mmol/g	HL12014.0005	5 g	225,00	
PARTICLE SIZE 75 µm	HL12014.0025	25 g	850,00	
	HL12014.0050	50 g	1375,00	
HMPB-ChemMatrix			CM-7820	
4-(4-Hydroxymethyl-3-methoxyphenoxy)-butanoyl amide	CM-7820.0001	1 g	100,00	
ChemMatrix Resin	CM-7820.0005	5 g	300,00	
LOADING 0.40-0.65 mmol/g	CM-7820.0025	25 g	1200,00	
PARTICLE SIZE 100-200 mesh	CM-7820.0100	100 g	3600,00	
TG S AC (90µm)			S-30011	
TentaGel S AC	S-30011.0001	1 g	60,00	
LOADING 0.2-0.3 mmol/g	S-30011.0005	5 g	190,00	
PARTICLE SIZE 90 µm	S-30011.0025	25 g	840,00	
	S-30011.0050	50 g	1390,00	
SYNONYMS	3-methoxy-4-(hydroxymethyl)phenoxyacetyl-TentaGel S resin			
DESCRIPTION	Peptides and other esters can be cleaved with 1-5% TFA in DCM. This property makes it very useful for a high number of applications. TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 3000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.			
TG HL AC (75µm)			HL12011	
TentaGel HL AC (75µm)	HL12011.0001	1 g	85,00	
LOADING 0.3-0.4 mmol/g	HL12011.0005	5 g	250,00	
PARTICLE SIZE 75 µm	HL12011.0025	25 g	1100,00	
	HL12011.0050	50 g	1750,00	
SYNONYMS	3-methoxy-4-(hydroxymethyl)phenoxyacetyl-TentaGel HL resin			

9.1.5. Resins for the Synthesis of Peptide Amides

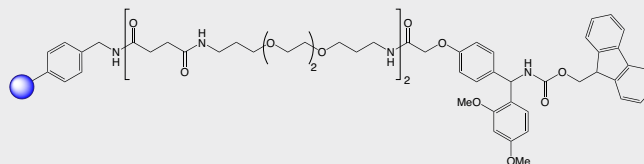
	Article No.	Quantity	Price	
Brominated Wang Resin				BR-5060
Brominated Wang Resin	BR-5060.0005	5 g	175,00	
LOADING 1.0-1.5 mmol/g	BR-5060.0025	25 g	700,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
Brominated Wang Resin				BR-5231
Brominated Wang Resin	BR-5231.0005	5 g	200,00	
LOADING 0.5-1.5 mmol/g	BR-5231.0025	25 g	800,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB				
Fmoc-Rink-Amid AM resin				BR-1320
Fmoc-Rink Amide aminomethyl-polystyrene resin	BR-1320.0025	25 g	310,00	
LOADING < 0.4 mmol/g	BR-1320.0100	100 g	620,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-1320.0250	250 g	1160,00	
Fmoc-Rink Amide AM resin				BR-1330
Fmoc-Rink Amide aminomethyl-polystyrene resin	BR-1330.0005	5 g	118,00	
LOADING 0.4-0.9 mmol/g	BR-1330.0025	25 g	310,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-1330.0100	100 g	620,00	
Fmoc-Rink-Amid AM resin				BR-1340
Fmoc-Rink Amide aminomethyl-polystyrene resin	BR-1340.0025	25 g	310,00	
LOADING 0.4-0.8 mmol/g	BR-1340.0100	100 g	620,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-1340.0250	250 g	1160,00	
Fmoc-Rink-Amid-2CT resin				BR-1310
Fmoc-Rink Amide 2-chlorotriptyl resin	BR-1310.0025	25 g	310,00	
LOADING > 0.4 mmol/g	BR-1310.0100	100 g	1000,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
Fmoc-Rink-Amid-2CT resin				BR-1315
Fmoc-Rink Amide 2-chlorotriptyl resin	BR-1315.0025	25 g	150,00	
LOADING > 0.4 mmol/g	BR-1315.0100	100 g	450,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-1315.0250	250 g	900,00	

Fmoc-Rink-Amide PEG AM Resin BR-1360

Fmoc-Rink Amide PEG aminomethyl-polystyrene

LOADING > 0.3 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

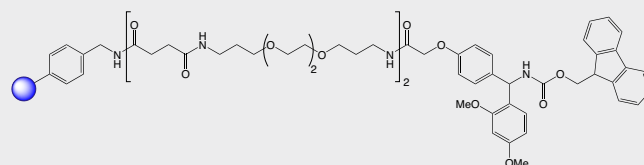
Article No.	Quantity	Price
BR-1360.0005	5 g	140,00
BR-1360.0025	25 g	560,00
BR-1360.0100	100 g	1580,00

**Fmoc-Rink-Amide PEG AM Resin BR-1365**

Fmoc-Rink Amide PEG aminomethyl-polystyrene

LOADING > 0.3 mmol/g
 PARTICLE SIZE 200-400 mesh
 CROSSLINKING 1% DVB

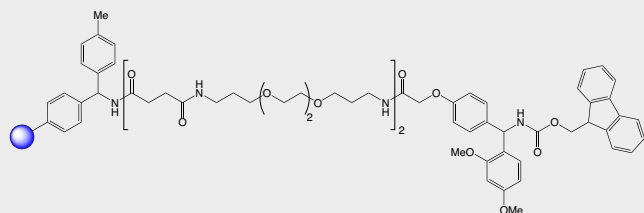
Article No.	Quantity	Price
BR-1365.0005	5 g	140,00
BR-1365.0025	25 g	560,00
BR-1365.0100	100 g	1580,00

**Fmoc-Rink-Amide PEG MBHA Resin BR-1366**

Fmoc-Rink Amide PEG 4-methylbenzhydrylamine resin

LOADING > 0.4 mmol/g
 PARTICLE SIZE 200-400 mesh
 CROSSLINKING 1% DVB

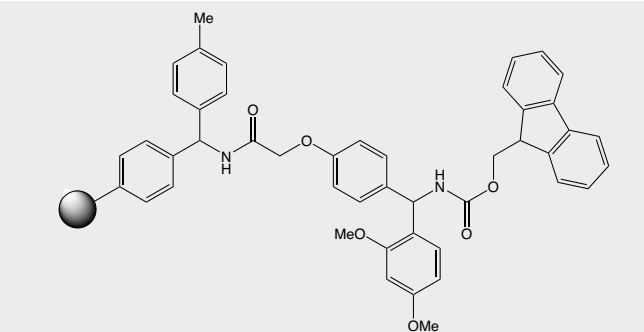
Article No.	Quantity	Price
BR-1366.0005	5 g	170,00
BR-1366.0025	25 g	600,00

**Fmoc-Rink-Amid MBHA resin BR-1300**

Fmoc-Rink-Amide-4-methylbenzhydrylamine resin, Knorr Resin

CAS-NO 431041-83-7
 LOADING > 0.5 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

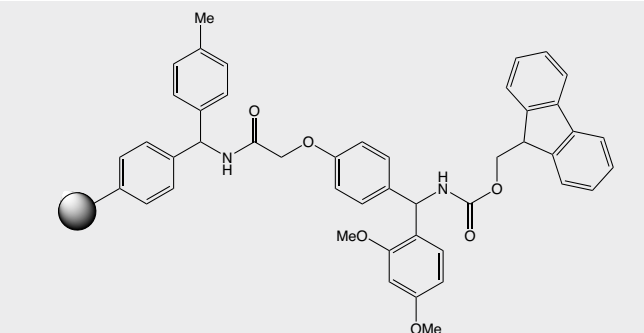
Article No.	Quantity	Price
BR-1300.0025	25 g	310,00
BR-1300.0100	100 g	620,00
BR-1300.0250	250 g	1160,00

**Fmoc-Rink-Amid-MBHA resin BR-1305**

Fmoc-Rink-Amide-4-methylbenzhydrylamine resin, Knorr Resin

CAS-NO 431041-83-7
 LOADING 0.4-0.9 mmol/g
 PARTICLE SIZE 200-400 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
BR-1305.0025	25 g	310,00
BR-1305.0100	100 g	620,00
BR-1305.0250	250 g	1160,00



Prices are in EUR, net, exw Germany

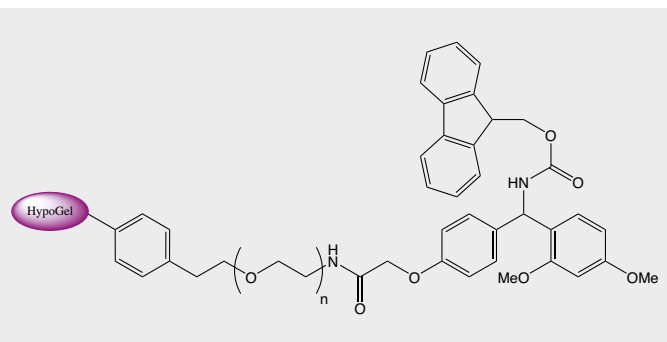
HypoGel® 200 RAM BRH1110

Fmoc-Rink-Amide-PEG200-HypoGel (n=5)

LOADING 0.6-0.7 mmol/g

PARTICLE SIZE 110-150 µm

Article No.	Quantity	Price
BRH1110.0005	5 g	190,00
BRH1110.0025	25 g	750,00
BRH1110.0100	100 g	2660,00

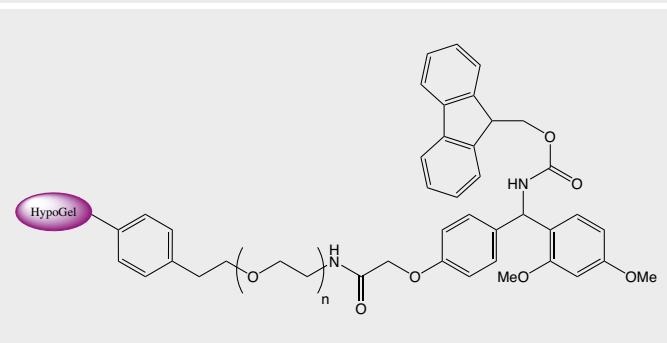

HypoGel® 400 RAM BRH1230

Fmoc-Rink-Amide-PEG400-HypoGel (n=10)

LOADING 0.5-0.6 mmol/g

PARTICLE SIZE 110-150 µm

Article No.	Quantity	Price
BRH1230.0005	5 g	190,00
BRH1230.0025	25 g	750,00
BRH1230.0100	100 g	2660,00

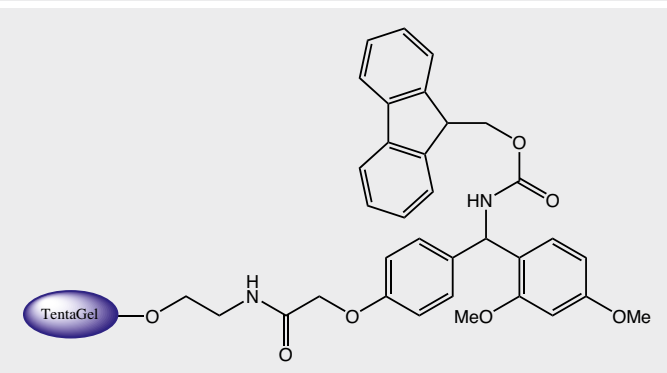

TG R RAM (90µm) R28023

TentaGel R RAM (90µm)

LOADING 0.18-0.22 mmol/g

PARTICLE SIZE 90 µm

Article No.	Quantity	Price
R28023.0001	1 g	80,00
R28023.0005	5 g	195,00
R28023.0025	25 g	525,00
R28023.0100	100 g	1700,00

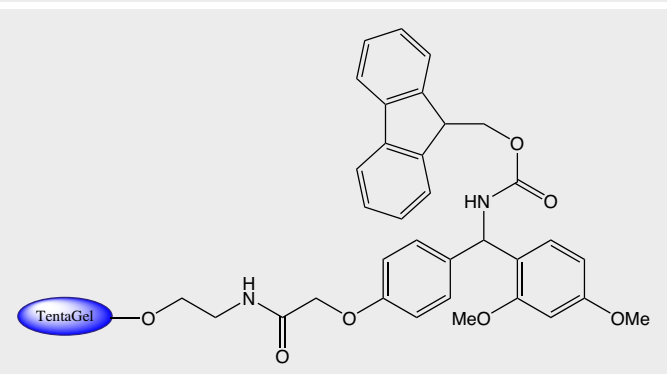

TG S RAM (90µm) S-30023

TentaGel S RAM

LOADING 0.2-0.25 mmol/g

PARTICLE SIZE 90 µm

Article No.	Quantity	Price
S-30023.0001	1 g	60,00
S-30023.0005	5 g	120,00
S-30023.0025	25 g	460,00
S-30023.0100	100 g	1620,00

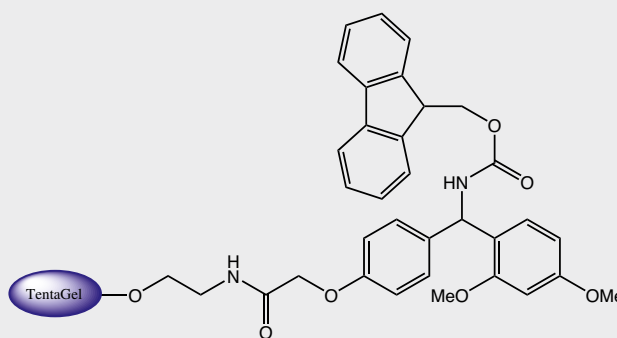


DESCRIPTION TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 3000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.

TG HL RAM (75µm) HL12023

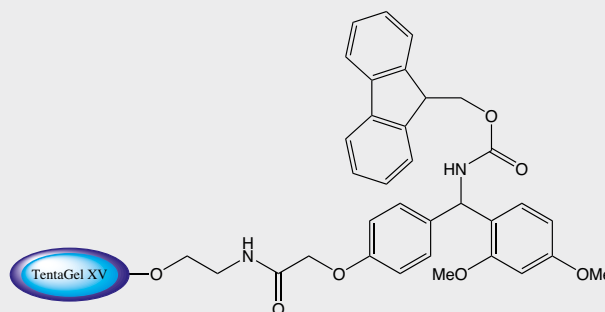
TentaGel HL RAM (75µm)
 LOADING 0.3-0.4 mmol/g
 PARTICLE SIZE 75 µm

Article No.	Quantity	Price
HL12023.0001	1 g	80,00
HL12023.0005	5 g	195,00
HL12023.0025	25 g	525,00
HL12023.0100	100 g	1700,00

**TG XV RAM (100µm) XV30023**

Fmoc-Rink-Amide-TentaGel XV
 LOADING 0.2-0.4 mmol/g
 PARTICLE SIZE 100-200 µm

Article No.	Quantity	Price
XV30023.0001	1 g	80,00
XV30023.0005	5 g	190,00
XV30023.0025	25 g	560,00



DESCRIPTION Due to modifications of the polystyrene backbone TentaGel XV shows extended swelling properties providing a large reaction volume. It is a superior resin for synthesizing difficult sequences, aggregating peptides, mini proteins, and PNAs in high purity and excellent yields.

Literature:

R. Pipkorn *et al.*; *Int. J. Med. Sci.* 2013; **10**: 331.

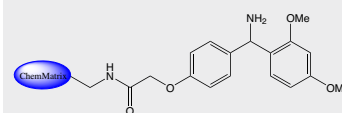
W. Rapp *et al.* in *Peptides 2012*, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.28.

S. Rawer *et al.* in *Peptides 2012*, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.406.

H-Rink-Amide-ChemMatrix® CM-7600

H-Rink-Amide-ChemMatrix® Resin
 LOADING 0.4-0.6 mmol/g
 PARTICLE SIZE 100-200 mesh

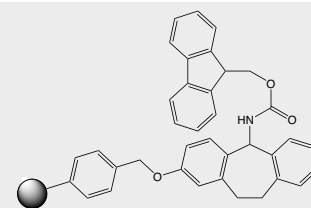
CM-7600.0001	1 g	100,00
CM-7600.0005	5 g	300,00
CM-7600.0025	25 g	1200,00
CM-7600.0100	100 g	3600,00

**Ramage Resin BR-5204**

5-(9-Fluorenylmethyloxycarbonyl)amino-10,11-dihydro-5H-dibenzo[a,d]cycloheptenyl-2-oxy polystyrene

LOADING 0.5-1.3 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

BR-5204.0001	1 g	85,00
BR-5204.0005	5 g	275,00



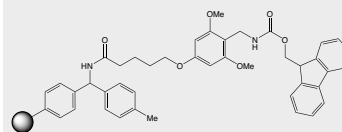
SYNONYMS DCHD Resin

PAL-MBHA Resin BR-5209

5-(4-Fmoc-aminomethyl-3,5-dimethoxyphenoxy)-pentanoyl amide 4-methyl-benzhydryl polystyrene

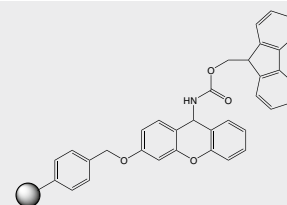
LOADING 0.4-0.8 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

BR-5209.0001	1 g	430,00
BR-5209.0005	5 g	580,00



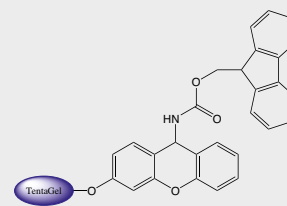
Prices are in EUR, net, exw Germany

		Article No.	Quantity	Price
Fmoc-Sieber-PS resin		BR-2000		
Fmoc-Sieber-polystyrene resin		BR-2000.0001	1 g	95,00
CAS-NO	915706-90-0	BR-2000.0005	5 g	245,00
LOADING	0.5-0.9 mmol/g	BR-2000.0025	25 g	925,00
PARTICLE SIZE	100-200 mesh	BR-2000.0100	100 g	2600,00
CROSSLINKING	1% DVB			



SYNONYMS 9-(9-Fluorenylmethyloxycarbonylamino)-9H-xanthen-3-yl-oxymethylpolystyrene

		Article No.	Quantity	Price
Fmoc-Sieber-TG resin		BR-2005		
Fmoc-Sieber-TentaGel resin		BR-2005.0001	1 g	95,00
LOADING	0.2-0.3 mmol/g	BR-2005.0005	5 g	295,00
PARTICLE SIZE	130 µm	BR-2005.0025	25 g	1150,00
		BR-2005.0100	100 g	3250,00



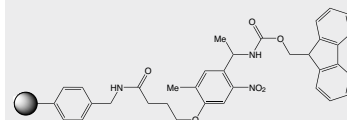
SYNONYMS 9-(9-Fluorenylmethyloxycarbonylamino)-9H-xanthen-3-yl-oxymethyl TentaGel

DESCRIPTION Fmoc-Sieber amide resin is an acid-labile carrier for solid phase synthesis of peptide amides. Cleavage can be achieved with only 1% TFA in DCM making them an ideal carrier for the synthesis of protected peptide fragments in fragment condensation strategies for the synthesis of long peptides. It has also been used in organic synthesis of acid-sensitive compounds, for targeted synthesis of primary amines and N-alkylated secondary carboxyamides.

Literature:

P.Sieber; *Tetrahedron Lett.* 1987; **28**: 2107.
 C.Somlai, et al. in „Peptides 1992, Proc. 22nd European Peptide Symposium“, C.H.Schneider & A.N.Eberle (Eds.) 1993; 198.
 P.Gupta, et al.; *Tetrahedron Lett.* 2002; **58**: 10469.
 W.C.Chan, et al.; *J.Chem.Soc.,Chem.Comm.* 1995; 1475.
 W.C.Chan, et al.; *J.Chem.Soc.,Chem.Comm.* 1995; 589.
 E.A.Boyd, et al.; *Tetrahedron Lett.* 1996; **37**: 1647.
 N.D.Home, et al.; *Tetrahedron Lett.* 2002; **42**: 1115.

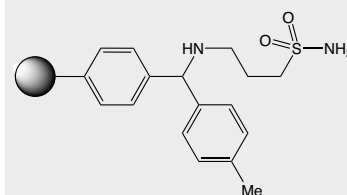
		Article No.	Quantity	Price
Fmoc-Photolabile Resin		BR-5205		
4-[4-[1-(Fmoc-amino)-ethyl]-2-methoxy-5-nitrophenoxy]butanamide polystyrene		BR-5205.0001	1 g	175,00
LOADING	0.6-1.0 mmol/g	BR-5205.0005	5 g	600,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			



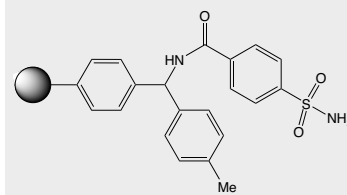
DESCRIPTION Literature:

Holmes, C.P., Jones, D.G.; *J.Org.Chem.* 1995; **60**: 2318-2319.
 Holmes, C.P.; *J.Org.Chem.* 1997; **62**: 2370-2380.
 Ruhland, B., Bhandari, A., Gordon, E.M., Gallop, M.A.; *J.Am.Chem.Soc.* 1996; **118**: 253-254.

		Article No.	Quantity	Price
Safety Catch (Aliphatic) MBHA Resin		BR-5093		
4-(Amidosulfonyl)butyramido-4-methyl-benzhydryl resin		BR-5093.0001	1 g	100,00
LOADING	0.7-1.3 mmol/g	BR-5093.0005	5 g	350,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			



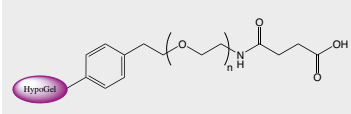
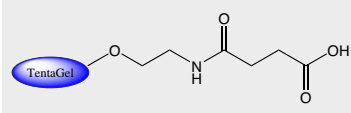
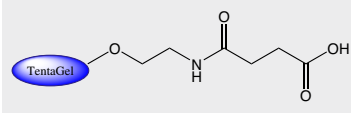
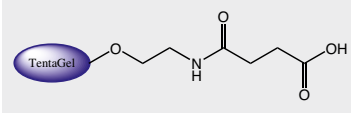
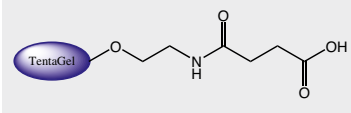
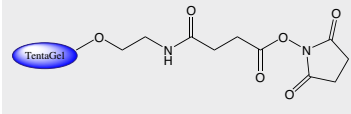
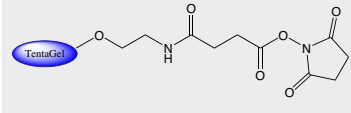
		Article No.	Quantity	Price
Safety Catch (Aromatic) MBHA Resin		BR-5094		
4-(Amidosulfonyl)benzoylamido-4-methyl-benzhydryl resin		BR-5094.0001	1 g	50,00
LOADING	0.7-1.3 mmol/g	BR-5094.0005	5 g	175,00
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			



9.1.6. Base Resins with Acid and Active Ester Functions

	Article No.	Quantity	Price	
Polystyrene-COOH				BR-5213
Carboxy polystyrene	BR-5213.0005	5 g	100,00	
LOADING 1.0-2.4 mmol/g	BR-5213.0025	25 g	275,00	
PARTICLE SIZE 100-200 mesh	BR-5213.0100	100 g	825,00	
CROSSLINKING 1% DVB				
Polystyrene-COOH				BR-5259
Carboxy polystyrene	BR-5259.0005	5 g	100,00	
LOADING 1.0-1.8 mmol/g	BR-5259.0025	25 g	370,00	
PARTICLE SIZE 200-400 mesh	BR-5259.0100	100 g	1250,00	
CROSSLINKING 1% DVB				
Polystyrene-AM-COOH				BR-5256
Aminomethyl-succinamic acid polystyrene	BR-5256.0005	5 g	60,00	
LOADING 0.8-1.2 mmol/g	BR-5256.0025	25 g	220,00	
PARTICLE SIZE 100-200 mesh	BR-5256.0100	100 g	760,00	
CROSSLINKING 1% DVB				
Polystyrene-AM-COOH				BR-5257
Aminomethyl-succinamic acid polystyrene	BR-5257.0005	5 g	60,00	
LOADING 0.8-1.2 mmol/g	BR-5257.0025	25 g	220,00	
PARTICLE SIZE 200-400 mesh	BR-5257.0100	100 g	760,00	
CROSSLINKING 1% DVB				
Polystyrene-AE-COOH				BR-5251
Aminoethyl-succinamic acid polystyrene	BR-5251.0005	5 g	110,00	
LOADING 0.8-1.2 mmol/g	BR-5251.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh	BR-5251.0100	100 g	1590,00	
CROSSLINKING 1% DVB				
Polystyrene-AE-COOH				BR-5252
Aminoethyl-succinamic acid polystyrene	BR-5252.0005	5 g	110,00	
LOADING 0.8-1.2 mmol/g	BR-5252.0025	25 g	450,00	
PARTICLE SIZE 200-400 mesh	BR-5252.0100	100 g	1590,00	
CROSSLINKING 1% DVB				
HypoGel®200 COOH				BRH1000
HypoGel-PEG200-aminoalkyl-succinamic acid (n=5)	BRH1000.0005	5 g	110,00	
LOADING 0.6-0.9 mmol/g	BRH1000.0025	25 g	450,00	
PARTICLE SIZE 110-150 µm	BRH1000.0100	100 g	1590,00	

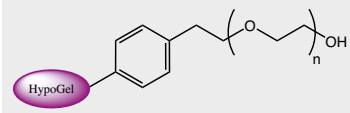
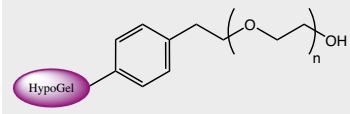
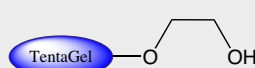
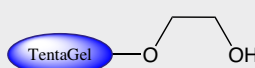
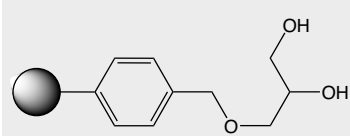
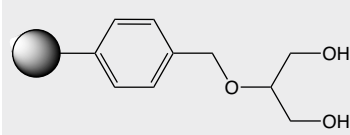
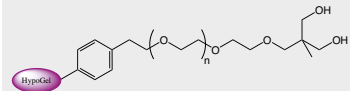
Prices are in EUR, net, exw Germany

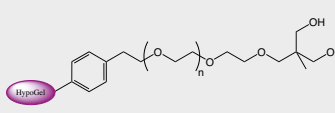
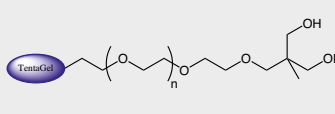
	Article No.	Quantity	Price	
HypoGel@400 COOH			BRH1020	
HypoGel-PEG400-aminoalkyl-succinamic acid (n=10)	BRH1020.0005	5 g	110,00	
LOADING 0.5-0.7 mmol/g	BRH1020.0025	25 g	450,00	
PARTICLE SIZE 110-150 µm	BRH1020.0100	100 g	1590,00	
TG S COOH (90µm)			S-30903	
TentaGel S COOH	S-30903.0001	1 g	60,00	
LOADING 0.2-0.3 mmol/g	S-30903.0005	5 g	140,00	
PARTICLE SIZE 90 µm	S-30903.0025	25 g	530,00	
	S-30903.0100	100 g	1610,00	
TG S COOH (130µm)			S-30133	
TentaGel S COOH	S-30133.0001	1 g	60,00	
LOADING 0.2-0.3 mmol/g	S-30133.0005	5 g	140,00	
PARTICLE SIZE 130 µm	S-30133.0025	25 g	530,00	
	S-30133.0100	100 g	1610,00	
TG HL COOH (75µm)			HL12903	
TentaGel HL COOH (75µm)	HL12903.0001	1 g	75,00	
LOADING 0.4-0.6 mmol/g	HL12903.0005	5 g	175,00	
PARTICLE SIZE 75 µm	HL12903.0025	25 g	675,00	
	HL12903.0100	100 g	2050,00	
TG HL COOH (110µm)			HL12133	
TentaGel HL COOH (110µm)	HL12133.0001	1 g	75,00	
LOADING 0.4-0.6 mmol/g	HL12133.0005	5 g	175,00	
PARTICLE SIZE 110 µm	HL12133.0025	25 g	675,00	
	HL12133.0100	100 g	2050,00	
TG S CO-NHS (90µm)			S-30905	
TentaGel S Succinimidyl ester	S-30905.0001	1 g	70,00	
LOADING 0.2-0.3 mmol/g	S-30905.0005	5 g	220,00	
PARTICLE SIZE 90 µm	S-30905.0025	25 g	910,00	
TG S CO-NHS (130µm)			S-30135	
TentaGel S Succinimidyl ester	S-30135.0001	1 g	70,00	
LOADING 0.2-0.3 mmol/g	S-30135.0005	5 g	220,00	
PARTICLE SIZE 130 µm	S-30135.0025	25 g	520,00	

9.1.7. Base Resins with Alcohol Functions

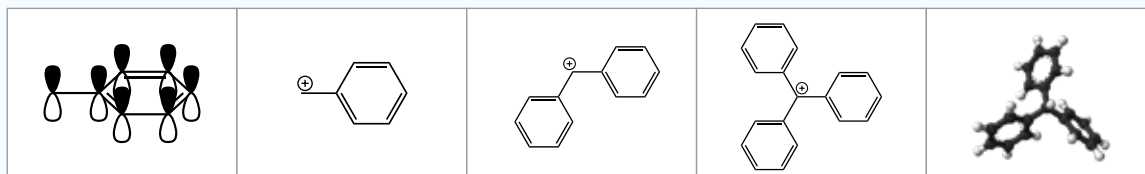
	Article No.	Quantity	Price	
Polystyrene-Me-OH				BR-5019
Hydroxymethylpolystyrene	BR-5019.0025	25 g	120,00	
LOADING 0.7-1.2 mmol/g	BR-5019.0100	100 g	490,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-OH				BR-5214
Hydroxymethylpolystyrene	BR-5214.0025	25 g	120,00	
LOADING 1.3-2.5 mmol/g	BR-5214.0100	100 g	325,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-OH				BR-5020
Hydroxymethylpolystyrene	BR-5020.0025	25 g	120,00	
LOADING 0.7-1.2 mmol/g	BR-5020.0100	100 g	325,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Et-OH				BR-5113
Hydroxyethylpolystyrene	BR-5113.0005	5 g	50,00	
LOADING 0.8-1.5 mmol/g	BR-5113.0025	25 g	200,00	
PARTICLE SIZE 100-200 mesh	BR-5113.0100	100 g	700,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-OH				BR-5114
Hydroxyethylpolystyrene	BR-5114.0005	5 g	50,00	
LOADING 0.8-1.5 mmol/g	BR-5114.0025	25 g	200,00	
PARTICLE SIZE 200-400 mesh	BR-5114.0100	100 g	700,00	
CROSSLINKING 1% DVB				
Polystyrene-Bu-OH				BR-5111
Hydroxybutylpolystyrene	BR-5111.0005	5 g	90,00	
LOADING 0.8-1.2 mmol/g	BR-5111.0025	25 g	350,00	
PARTICLE SIZE 100-200 mesh	BR-5111.0100	100 g	1250,00	
CROSSLINKING 1% DVB				
Polystyrene-Bu-OH				BR-5112
Hydroxybutylpolystyrene	BR-5112.0005	5 g	90,00	
LOADING 0.8-1.2 mmol/g	BR-5112.0025	25 g	350,00	
PARTICLE SIZE 200-400 mesh	BR-5112.0100	100 g	1250,00	
CROSSLINKING 1% DVB				

Prices are in EUR, net, exw Germany

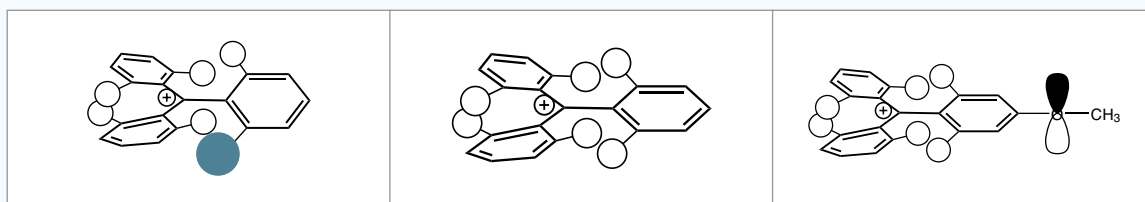
	Article No.	Quantity	Price	
HypoGel200® OH				BRH1280
HypoGel-PEG200-alcohol (n=5)	BRH1280.0005	5 g	75,00	
LOADING 0.6-0.9 mmol/g	BRH1280.0025	25 g	225,00	
PARTICLE SIZE 110-150 µm	BRH1280.0100	100 g	695,00	
HypoGel400® OH				BRH1290
HypoGel-PEG400-alcohol (n=5)	BRH1290.0005	5 g	75,00	
LOADING 0.5-0.7 mmol/g	BRH1290.0025	25 g	225,00	
PARTICLE SIZE 110-150 µm	BRH1290.0100	100 g	695,00	
TG S OH (130µm)				S-30130
TentaGel S OH	S-30130.0005	5 g	100,00	
LOADING 0.2-0.3 mmol/g	S-30130.0025	25 g	390,00	
PARTICLE SIZE 130 µm	S-30130.0100	100 g	1150,00	
TG S OH (90µm)				S-30900
TentaGel S OH	S-30900.0005	5 g	100,00	
LOADING 0.2-0.3 mmol/g	S-30900.0025	25 g	390,00	
PARTICLE SIZE 90 µm	S-30900.0100	100 g	1150,00	
1-Diol Resin				BR-5206
1-Glycerol Resin	BR-5206.0005	5 g	85,00	
LOADING 0.6-1.2 mmol/g	BR-5206.0025	25 g	275,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
2-Diol Resin				BR-5224
2-Glycerol Resin	BR-5224.0005	5 g	200,00	
LOADING 1.3-2.5 mmol/g	BR-5224.0025	25 g	700,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
HypoGel® 200 Diol				BRH1070
HypoGel-PEG200-1,3-propanediol (n=5)	BRH1070.0005	5 g	140,00	
LOADING 1.2-1.5 mmol/g	BRH1070.0025	25 g	520,00	
PARTICLE SIZE 110-150 µm	BRH1070.0100	100 g	1860,00	
DESCRIPTION	An ideal support for immobilizing aldehydes via acetal formation			

	Article No.	Quantity	Price	
HypoGel® 400 Diol			BRH1190	
HypoGel-PEG400-1,3-propanediol (n=10)	BRH1190.0005	5 g	140,00	
LOADING 0.9-1.3 mmol/g	BRH1190.0025	25 g	520,00	
PARTICLE SIZE 110-150 µm	BRH1190.0100	100 g	1860,00	
DESCRIPTION An ideal support for immobilizing aldehydes via acetal formation				
TG HL Diol (75µm)			HL12010	
TentaGel HL Diol (75µm)	HL12010.0005	5 g	145,00	
LOADING 0.6-0.8 mmol/g	HL12010.0025	25 g	525,00	
PARTICLE SIZE 75 µm	HL12010.0100	100 g	1850,00	
DESCRIPTION This resin is an ideal support for aldehyde immobilization via acetal formation. TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 1500 Da to 2000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.				

Stability of Benzyl-type Protecting Groups and Linkers



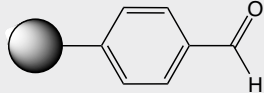
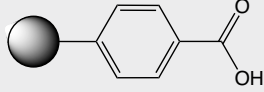
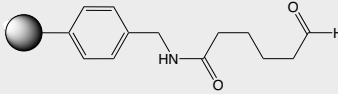
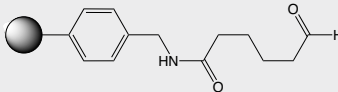
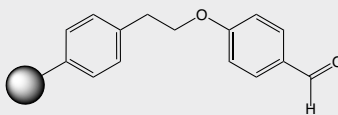
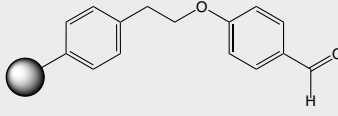
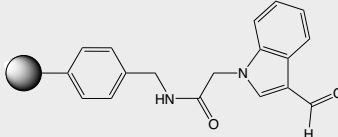
Benzyl, Benzhydryl and Trityl moieties are frequently used as protecting groups, as linkers for solidphase synthesis, or as important structural elements of both categories. The reason for this popularity is that the bond between benzylic carbons and neighboring moieties can be cleaved under relatively mild conditions. This is a result of the high degree of stabilization of the carbenium ion on the benzylic position that is formed upon acidic cleavage by delocalization of the positive charge. The degree of delocalization is higher and thus the stabilization stronger the more phenyl rings are attached to the benzylic position.



The stability of benzyl-type protecting groups and linkers can be fine-tuned by the incorporation of substituents on the phenyl rings that modify the electron density on the benzylic position, or change the degree of overlap of the π -orbitals of several phenyl rings. In the former category, methyl and methoxy groups are the most frequently used substituents to further stabilize benzylic carbocations, thereby allowing for even milder cleavage conditions. In the latter category, chlorine is the most common substituent. In trityl groups, the large atomic radius of chlorine results in a less planar conformation of the three phenyl rings, which in turn leads to a reduction of π -orbital overlap. The degree of delocalization of a positive charge on the benzylic position is thereby decreased, which means that the protecting group or linker in question is more difficult to cleave and thus more stable. Hence, the following row of stability can be defined:

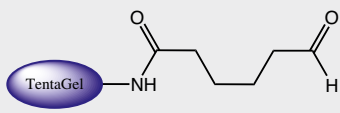
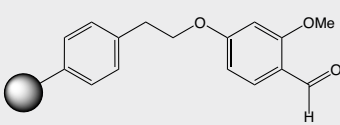
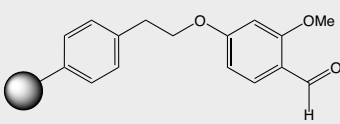
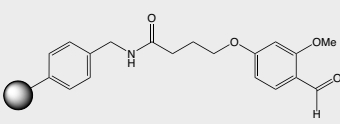
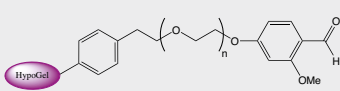
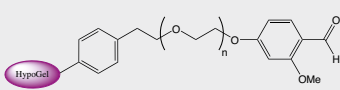
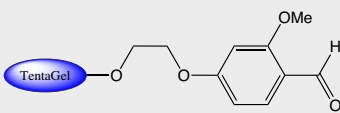
2-chlorotrityl > trityl > 4-methyltrityl > 4-methoxytrityl > 4,4'-dimethoxytrityl

9.1.8. Base Resins with Aldehyde Functions

	Article No.	Quantity	Price	
Polystyrene-CHO BR-5217				
Formylpolystyrene	BR-5217.0025	25 g	200,00	
LOADING 0.7-1.5 mmol/g	BR-5217.0100	100 g	550,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
Polystyrene-CHO BR-5263				
Formylpolystyrene	BR-5263.0005	5 g	100,00	
LOADING 0.6-0.9 mmol/g	BR-5263.0025	25 g	370,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-5263.0100	100 g	1250,00	
Polystyrene-AM-CHO BR-5254				
6-Oxo-caproic-amidomethyl polystyrene	BR-5254.0005	5 g	240,00	
LOADING 0.8-1.2 mmol/g	BR-5254.0025	25 g	945,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-5254.0100	100 g	3125,00	
Polystyrene-AM-CHO BR-5255				
6-Oxo-caproic-amidomethyl polystyrene	BR-5255.0005	5 g	240,00	
LOADING 0.8-1.2 mmol/g	BR-5255.0025	25 g	945,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-5255.0100	100 g	3125,00	
Polystyrene-O-Ph-CHO BR-5276				
4-Alkoxybenzaldehyde resin	BR-5276.0005	5 g	110,00	
LOADING 0.7-1.1 mmol/g	BR-5276.0025	25 g	440,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-5276.0100	100 g	1550,00	
Polystyrene-O-Ph-CHO BR-5277				
4-Alkoxybenzaldehyde resin	BR-5277.0005	5 g	110,00	
LOADING 0.7-1.1 mmol/g	BR-5277.0025	25 g	440,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-5277.0100	100 g	1550,00	
Polystyrene-Indole-CHO BR-5218				
Indole resin	BR-5218.0005	5 g	150,00	
LOADING 0.5-1.5 mmol/g	BR-5218.0025	25 g	550,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-5218.0100	100 g	1650,00	

	Article No.	Quantity	Price	
HypoGel® 200 FP				BRH1090
4-Formyl-phenoxy-PEG200-HypoGel (n=5)	BRH1090.0005	5 g	110,00	
LOADING 0.5-0.7 mmol/g	BRH1090.0025	25 g	390,00	
PARTICLE SIZE 110-150 µm	BRH1090.0100	100 g	1200,00	
HypoGel® 400 FP				BRH1210
4-Formyl-phenoxy-PEG400-HypoGel (n=10)	BRH1210.0005	5 g	110,00	
LOADING 0.4-0.6 mmol/g	BRH1210.0025	25 g	390,00	
PARTICLE SIZE 110-150 µm	BRH1210.0100	100 g	1200,00	
HypoGel® 200 CHO				BRH1060
6-Oxo-caproic-amidoalkyl-PEG200-HypoGel (n=5)	BRH1060.0005	5 g	140,00	
LOADING 0.6-0.9 mmol/g	BRH1060.0025	25 g	550,00	
PARTICLE SIZE 110-150 µm	BRH1060.0100	100 g	1970,00	
HypoGel® 400 CHO				BRH1180
6-Oxo-caproic-amidoalkyl-PEG400-HypoGel (n=10)	BRH1180.0005	5 g	140,00	
LOADING 0.6-0.9 mmol/g	BRH1180.0025	25 g	550,00	
PARTICLE SIZE 110-150 µm	BRH1180.0100	100 g	1970,00	
TG S CHO (90µm)				S-30906
TentaGel S CHO	S-30906.0001	1 g	70,00	
LOADING 0.2-0.3 mmol/g	S-30906.0005	5 g	240,00	
PARTICLE SIZE 90 µm	S-30906.0025	25 g	1010,00	
SYNONYMS	4-Formyl-phenoxy TentaGel S resin			
TG S CHO (130µm)				S-30136
TentaGel S CHO	S-30136.0001	1 g	70,00	
LOADING 0.2-0.3 mmol/g	S-30136.0005	5 g	240,00	
PARTICLE SIZE 130 µm	S-30136.0025	25 g	1010,00	
SYNONYMS	4-Formyl-phenoxy TentaGel S resin			
TG HL CHO (75µm)				HL12906
TG HL CHO (75µm)	HL12906.0001	1 g	95,00	
LOADING 0.4-0.6 mmol/g	HL12906.0005	5 g	250,00	
PARTICLE SIZE 75 µm	HL12906.0025	25 g	1050,00	
	HL12906.0100	100 g	3100,00	
SYNONYMS	6-Oxo-caproic-amidyl TentaGel HL resin			

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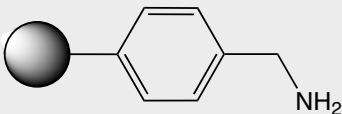
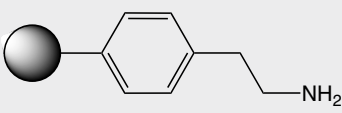
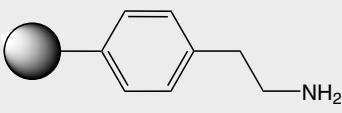
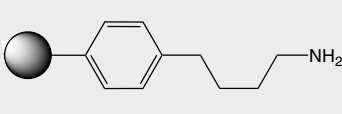
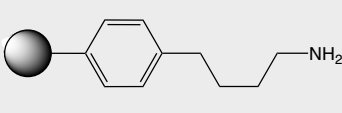
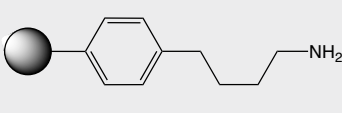
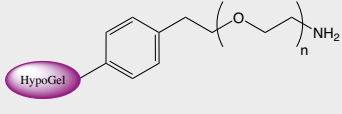
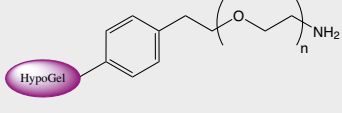
	Article No.	Quantity	Price	
TG HL CHO (110µm)			HL12136	
TentaGel HL CHO (110µm)	HL12136.0001	1 g	95,00	
LOADING 0.4-0.6 mmol/g	HL12136.0005	5 g	250,00	
PARTICLE SIZE 110 µm	HL12136.0025	25 g	1050,00	
	HL12136.0100	100 g	3100,00	
SYNONYMS 6-Oxo-caproic-amidyl TentaGel HL resin				
Polystyrene-FMP			BR-5272	
4-Formyl-3-methoxyphenoxy-ethyl polystyrene	BR-5272.0005	5 g	140,00	
LOADING 0.7-1.1 mmol/g	BR-5272.0025	25 g	540,00	
PARTICLE SIZE 100-200 mesh	BR-5272.0100	100 g	1920,00	
CROSSLINKING 1% DVB				
Polystyrene-FMP			BR-5273	
4-Formyl-3-methoxyphenoxy-ethyl polystyrene	BR-5273.0005	5 g	140,00	
LOADING 0.7-1.1 mmol/g	BR-5273.0025	25 g	540,00	
PARTICLE SIZE 200-400 mesh	BR-5273.0100	100 g	1920,00	
CROSSLINKING 1% DVB				
FMP AM Resin			BR-5056	
4-(4-Formyl-3-methoxyphenoxy)butyr amidomethyl polystyrene	BR-5056.0001	1 g	80,00	
LOADING 0.5-2.5 mmol/g	BR-5056.0005	5 g	250,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
HypoGel® 200 FMP			BRH1080	
4-Formyl-3-methoxyphenoxy-PEG200-HypoGel (n=5)	BRH1080.0005	5 g	120,00	
LOADING 0.5-0.7 mmol/g	BRH1080.0025	25 g	460,00	
PARTICLE SIZE 110-150 µm	BRH1080.0100	100 g	1630,00	
HypoGel® 400 FMP			BRH1200	
4-Formyl-3-methoxyphenoxy-PEG400-HypoGel (n=10)	BRH1200.0005	5 g	120,00	
LOADING 0.4-0.6 mmol/g	BRH1200.0025	25 g	460,00	
PARTICLE SIZE 110-150 µm	BRH1200.0100	100 g	1630,00	
TG S FMP (90µm)			S-30016	
TentaGel S FMP	S-30016.0005	5 g	120,00	
LOADING 0.2-0.25 mmol/g	S-30016.0025	25 g	440,00	
PARTICLE SIZE 90 µm	S-30016.0100	100 g	1560,00	
SYNONYMS 4-Formyl-3-methoxyphenoxy TentaGel S resin				

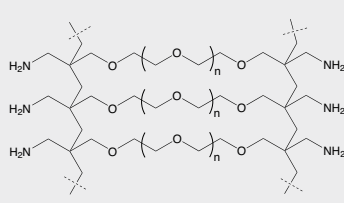
	Article No.	Quantity	Price	
TG HL FMP (75µm)			HL12016	
TentaGel HL FMP (75µm)	HL12016.0001	1 g	75,00	
LOADING 0.3-0.4 mmol/g	HL12016.0005	5 g	155,00	
PARTICLE SIZE 75 µm	HL12016.0025	25 g	600,00	
	HL12016.0100	100 g	2050,00	
SYNONYMS	4-Formyl-3-methoxyphenoxy TentaGel HL resin			
BAL Resin			BR-5201	
5-(4-Formyl-3,5-dimethoxyphenoxy)pentanoyl amido (4-methylphenyl)methyl polystyrene	BR-5201.0001	1 g	75,00	
LOADING 0.6-1.2 mmol/g	BR-5201.0005	5 g	250,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				

9.1.9. Base Resins with Amino and Hydrazino Functions

	Article No.	Quantity	Price	
Polystyrene-Me-NH₂			BR-1000a	
Aminomethyl polystyrene	BR-1000a.0100	100 g	145,00	
LOADING 0.6-0.9 mmol/g	BR-1000a.1000	1 kg	975,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂			BR-1000b	
Aminomethyl polystyrene	BR-1000b.0100	100 g	145,00	
LOADING 0.9-1.3 mmol/g	BR-1000b.1000	1 kg	975,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂			BR-1000c	
Aminomethyl polystyrene	BR-1000c.0100	100 g	145,00	
LOADING 1.3-2.5 mmol/g	BR-1000c.1000	1 kg	975,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂			BR-1005a	
Aminomethyl polystyrene	BR-1005a.0100	100 g	145,00	
LOADING 0.6-0.9 mmol/g	BR-1005a.1000	1 kg	975,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂			BR-1005b	
Aminomethyl polystyrene	BR-1005b.0100	100 g	145,00	
LOADING 0.9-1.3 mmol/g	BR-1005b.1000	1 kg	975,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				

Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price	
Polystyrene-Me-NH₂				BR-1005c
Aminomethyl polystyrene	BR-1005c.0100	100 g	145,00	
LOADING 1.3-2.5 mmol/g	BR-1005c.1000	1 kg	975,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB				
Polystyrene-Et-NH₂				BR-5266
Aminoethyl polystyrene	BR-5266.0005	5 g	110,00	
LOADING 0.8-1.4 mmol/g	BR-5266.0025	25 g	400,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	BR-5266.0100	100 g	1440,00	
Polystyrene-Et-NH₂				BR-5268
Aminoethyl polystyrene	BR-5268.0005	5 g	110,00	
LOADING 0.8-1.4 mmol/g	BR-5268.0025	25 g	400,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	BR-5268.0100	100 g	1440,00	
Polystyrene-Bu-NH₂				BR-5261
Aminobutyl polystyrene	BR-5261.0005	5 g	140,00	
LOADING 0.8-1.3 mmol/g	BR-5261.0025	25 g	550,00	
PARTICLE SIZE 45-80 µm CROSSLINKING 1% DVB	BR-5261.0100	100 g	1960,00	
Polystyrene-Bu-NH₂				BR-5262
Aminobutyl polystyrene	BR-5262.0005	5 g	140,00	
LOADING 0.8-1.3 mmol/g	BR-5262.0025	25 g	550,00	
PARTICLE SIZE 80-160 µm CROSSLINKING 1% DVB	BR-5262.0100	100 g	1960,00	
Polystyrene-Bu-NH₂				BR-5260
Aminobutyl polystyrene	BR-5260.0005	5 g	140,00	
LOADING 0.8-1.3 mmol/g	BR-5260.0025	25 g	550,00	
PARTICLE SIZE 125-160 µm CROSSLINKING 1% DVB	BR-5260.0100	100 g	1960,00	
HypoGel®200 NH₂				BRH1010
HypoGel-PEG200-alkylamine (n=5)	BRH1010.0005	5 g	110,00	
LOADING 0.6-0.9 mmol/g	BRH1010.0025	25 g	410,00	
PARTICLE SIZE 110-150 µm	BRH1010.0100	100 g	1440,00	
HypoGel®400 NH₂				BRH1030
HypoGel-PEG400-alkylamine (n=10)	BRH1030.0005	5 g	110,00	
LOADING 0.5-0.7 mmol/g	BRH1030.0025	25 g	410,00	
PARTICLE SIZE 110-150 µm	BRH1030.0100	100 g	1440,00	

	Article No.	Quantity	Price	
Aminomethyl-ChemMatrix			CM-7111	
Aminomethyl-ChemMatrix® Resin	CM-7111.0001	1 g	90,00	
LOADING	CM-7111.0005	5 g	250,00	
PARTICLE SIZE	CM-7111.0025	25 g	900,00	
	CM-7111.0100	100 g	2500,00	

DESCRIPTION

Literature:

Yésica García-Ramos, Marta Paradís-Bas, Judit Tulla-Puchea, and Fernando Albericio; ChemMatrix for complex peptides and combinatorial chemistry; *J. Pept. Sci.* 2010; **16**: 0; (www.interscience.com) DOI 10.1002/psc.1282

Mariela M. Marani, Eliandre Oliveira, Simón Côté, Silvia A. Camperi, Fernando Albericio, Osvaldo Cascone; Identification of protein-binding peptides by direct matrix-assisted laser desorption ionization time-of-flight mass spectrometry analysis of peptide beads selected from the screening of one bead-one peptide combinatorial libraries; *Analytical Biochemistry* 2007; **370**: 215-222.

Fayna García-Martin, Peter White, René Steinauer, Simón Côté, Judit Tulla-Puche, Fernando Albericio; RANTES, A Complex Aggregated Chemokine; *Biopolymers (Peptide Science)* 2006; **84**: 566-575; (www.interscience.wiley.com) DOI 10.1002/bip.20564.

Fayna García-Martin, Martina Quintanar-Audelo, Yésica García-Ramos, Luis J. Cruz, Catherine Gravel, Robert Furic, Simón Côté, Judit Tulla-Puche and Fernando Albericio; *J. Comb. Chem.* 2006; **8**: 213-220.

Mariela M. Marani, Marta Parads-Bas, Judit Tulla-Puche, Simón Côté, Silvia A. Camperi, Osvaldo Cascone and Fernando Albericio; From the One-Bead-One-Compound Concept to One-Bead-One-Reactor; *J. Comb. Chem.* 2007; **9** (3): 395-398; DOI: 10.1021/cc070012h

Mariela M. Marani, María C. Martínez Ceron, Silvana L. Giudicessi, Eliandre de Oliveira, Simn Coôté, Rosa Erra-Balsells, Fernando Albericio, Osvaldo Cascone, and Silvia A. Camperi; Screening of One-Bead-One-Peptide Combinatorial Library Using Red Fluorescent Dyes. Presence of Positive and False Positive Beads; *J. Comb. Chem.* 2009; **11** (1): 146-150; DOI: 10.1021/cc800145c

Synthesis of Oligonucleotide Derivatives Using ChemMatrix Supports; Stefania Mazzini, Fayna García-Martin, Margarita Alvira, Anna Avino, Brendan Manning, Fernando Albericio, and Ramon Eritja; *CHEMISTRY & BIODIVERSITY* 2008; **5**: 209-218.

Vernieri, E. *et al.*; An optimized Fmoc synthesis of human defensin 5. *Amino Acids* 2014; **46**: 395-400.

Pawel, Zajdel *et al.*; The pipecolic linker-an acid-labile handle for derivatization of secondary amines on a solid support. Part 3. *Tetrahedron Lett.* 2013; **54**(8):, 998-1002.

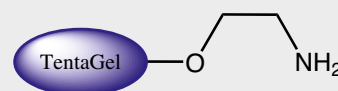
Marta Cal *et al.*; Solid phase synthesis of peptide hydroxamic acids on poly(ethylene glycol)-based support. *J. Pept. Sci.* 2012; **19**(1): 9-15.

Pipkorn, R. *et al.*; SPPS Resins Impact the PNA-Syntheses' Improvement. *Int. J. Med. Sci.* 2013; **10**: 331-337.

Muttenthaler Markus *et al.*; *J. Am. Chem. Soc.*, 2010; **132**(10): 3514-3522.

TG R NH₂ (90µm)**R28902**

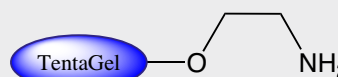
TentaGel R NH ₂	R28902.0005	5 g	125,00
LOADING	R28902.0025	25 g	475,00
PARTICLE SIZE	R28902.0100	100 g	1450,00



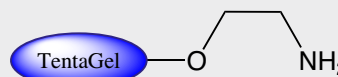
DESCRIPTION This resin is particularly useful for the synthesis of long and difficult peptides.

TG S NH₂ (90µm)**S-30902**

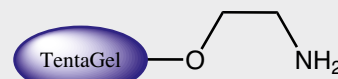
TentaGel S NH ₂	S-30902.0005	5 g	100,00
LOADING	S-30902.0025	25 g	390,00
PARTICLE SIZE	S-30902.0100	100 g	1150,00

**TG S NH₂ (130µm)****S-30132**

TentaGel S NH ₂	S-30132.0005	5 g	100,00
LOADING	S-30132.0025	25 g	390,00
PARTICLE SIZE	S-30132.0100	100 g	1150,00

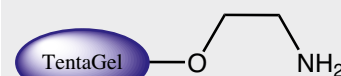
**TG HL NH₂ (75µm)****HL12902**

TentaGel HL NH ₂ (75 µm, 0.4-0.6 mmol/g)	HL12902.0005	5 g	120,00
LOADING	HL12902.0025	25 g	400,00
PARTICLE SIZE	HL12902.0100	100 g	1420,00



Prices are in EUR, net, exw Germany

		Article No.	Quantity	Price
TG HL NH₂ (110µm)		HL12132		
TentaGel HL NH ₂ (110 µm, 0.4-0.6 mmol/g)		HL12132.0005	5 g	120,00
LOADING	0.4-0.6 mmol/g	HL12132.0025	25 g	400,00
PARTICLE SIZE	110 µm	HL12132.0100	100 g	1420,00



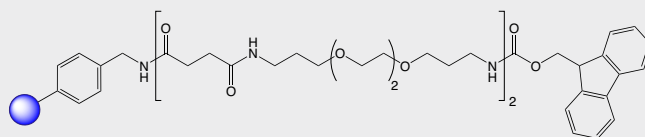
		Article No.	Quantity	Price
TG XV NH₂ (100µm)		XV30002		
TentaGel XV NH ₂		XV30002.0001	1 g	80,00
LOADING	0.2-0.4 mmol/g	XV30002.0005	5 g	140,00
PARTICLE SIZE	100-200 µm	XV30002.0025	25 g	460,00



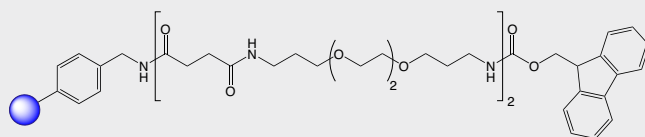
DESCRIPTION Due to modifications of the polystyrene backbone TentaGel XV shows extended swelling properties providing a large reaction volume. It is a superior resin for synthesizing difficult sequences, aggregating peptides, mini proteins, and PNAs in high purity and excellent yields.

Literature:
 R. Pipkorn *et al.*; *Int. J. Med. Sci.* 2013; **10**: 331.
 W. Rapp *et al.* in Peptides 2012, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.28.
 S. Rawer *et al.* in Peptides 2012, Proceedings of the 32nd European Peptide Symposium, G.Kokotos, V.Constantinou-Kokotos, J.Matsoukas (Eds.); European Peptide Society, 2012; p.406.

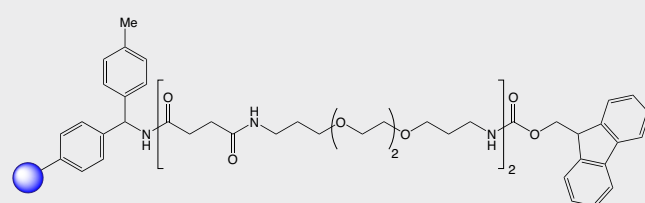
Fmoc-NH-PEG AM Resin		BR-1400	
[N1-(9-Fluorenylmethoxycarbonyl)-oligo[1,13-diamino-4,7,10-trioxatridecan-succinamido] polystyrene			
LOADING	> 0.3 mmol/g		
PARTICLE SIZE	100-200 mesh		
CROSSLINKING	1% DVB		
Article No.	Quantity	Price	
BR-1400.0005	5 g	85,00	
BR-1400.0025	25 g	340,00	



Fmoc-NH-PEG AM Resin		BR-1405	
[N1-(9-Fluorenylmethoxycarbonyl)-oligo[1,13-diamino-4,7,10-trioxatridecan-succinamido] polystyrene			
LOADING	> 0.3 mmol/g		
PARTICLE SIZE	200-400 mesh		
CROSSLINKING	1% DVB		
Article No.	Quantity	Price	
BR-1405.0005	5 g	85,00	
BR-1405.0025	25 g	340,00	



Fmoc-NH-PEG MBHA Resin		BR-1406	
[N1-(9-Fluorenylmethoxycarbonyl)-oligo[1,13-diamino-4,7,10-trioxatridecan-succinamido] (4-methylphenyl)methyl polystyrene			
LOADING	> 0.4 mmol/g		
PARTICLE SIZE	200-400 mesh		
CROSSLINKING	1% DVB		
Article No.	Quantity	Price	
BR-1406.0005	5 g	120,00	
BR-1406.0025	25 g	450,00	

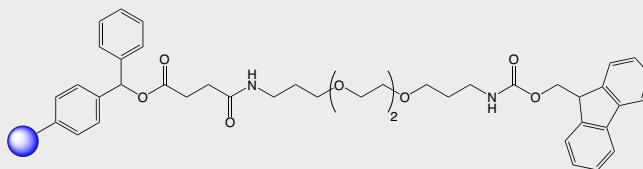


Fmoc-TTDS-BH Resin BR-9014

[N1-(9-Fluorenylmethoxycarbonyl)-1,13-diamino-4,7,10-trioxa-tridecan-succinamic acid-benzhydryl resin

LOADING > 0.3 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

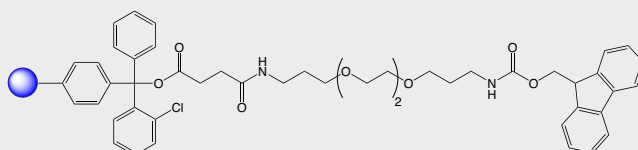
Article No.	Quantity	Price
BR-9014.0001	1 g	125,00
BR-9014.0005	5 g	500,00
BR-9014.0025	25 g	1800,00

**Fmoc-TTDS-Trt Resin BR-9013**

[N1-(9-Fluorenylmethoxycarbonyl)-1,13-diamino-4,7,10-trioxa-tridecan-succinamic acid-2-chlorotrityl resin

LOADING > 0.3 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
BR-9013.0001	1 g	125,00
BR-9013.0005	5 g	500,00
BR-9013.0025	25 g	1800,00

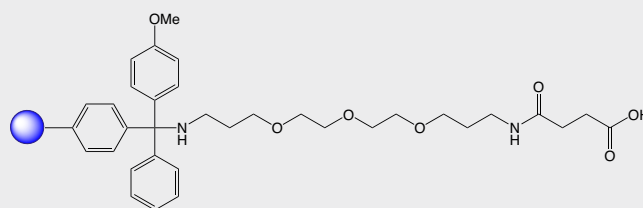
**TTDS-Mmt-Resin BR-9011**

1,13-diamino-4,7,10-trioxatridecan-13-succinamic acid-1-(4-methoxy-trityl) resin

LOADING > 0.3 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
BR-9011.0001	1 g	175,00
BR-9011.0005	5 g	350,00

SYNONYMS TTDS-MeOTrt-Resin

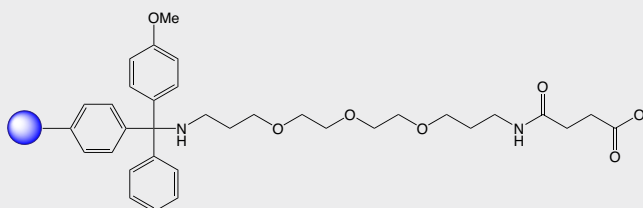
**TTDS-Mmt-Resin BR-9012**

1,13-diamino-4,7,10-trioxatridecan-13-succinamic acid-1-(4-methoxy-trityl) resin

LOADING > 0.3 mmol/g
 PARTICLE SIZE 200-400 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
BR-9012.0001	1 g	175,00
BR-9012.0005	5 g	350,00

SYNONYMS TTDS-MeOTrt-Resin

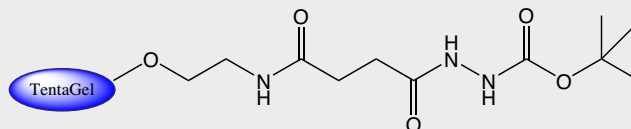


TG S NH-NH-Boc (90µm) S-30907

TentaGel S NH-NH-Boc
 LOADING 0.2-0.3 mmol/g
 PARTICLE SIZE 90 µm

Article No.	Quantity	Price
S-30907.0001	1 g	70,00
S-30907.0005	5 g	220,00
S-30907.0025	25 g	910,00

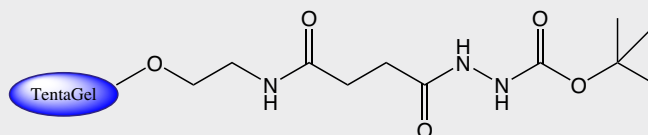
DESCRIPTION The hydrazido group can easily be converted into an azido group by treatment with NaNO₂/HCl and can then be used for nucleophilic substitution reactions.


TG S NH-NH-Boc (130µm) S-30137

TentaGel S NH-NH-Boc
 LOADING 0.2-0.3 mmol/g
 PARTICLE SIZE 130 µm

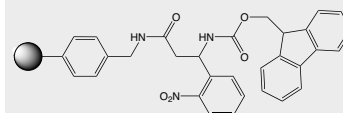
Article No.	Quantity	Price
S-30137.0001	1 g	70,00
S-30137.0005	5 g	220,00
S-30137.0025	25 g	910,00

DESCRIPTION The hydrazido group can easily be converted into an azido group by treatment with NaNO₂/HCl and can then be used for nucleophilic substitution reactions.


ANP-AM Resin

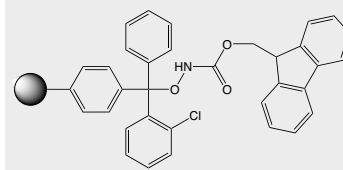
3-(Fmoc-amino)-3-(2-nitrophenyl)propionyl
 amidomethylpolystyrene
 LOADING 0.8-1.5 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

BR-5054		
BR-5054.0001	1 g	100,00
BR-5054.0005	5 g	360,00


Fmoc-NH-O-2CT Resin

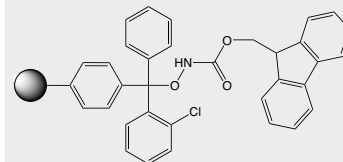
Fmoc-hydroxylamine-2-chlorotriyl resin
 LOADING 0.7-1.5 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

BR-5219		
BR-5219.0005	5 g	250,00
BR-5219.0025	25 g	950,00


Fmoc-NH-O-2CT Resin

Fmoc-hydroxylamine-2-chlorotriyl resin
 LOADING > 0.3 mmol/g
 PARTICLE SIZE 200-400 mesh
 CROSSLINKING 1% DVB

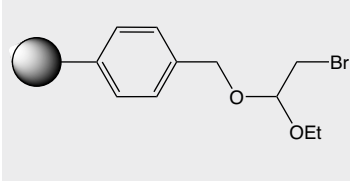
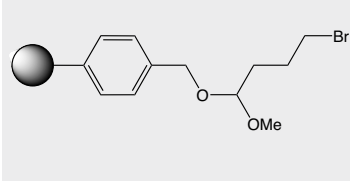
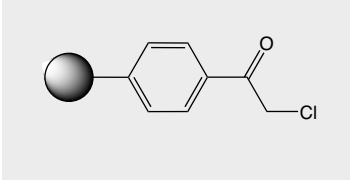
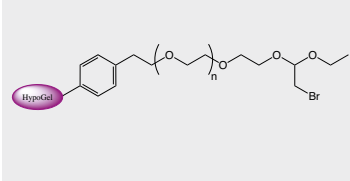
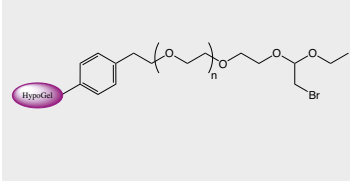
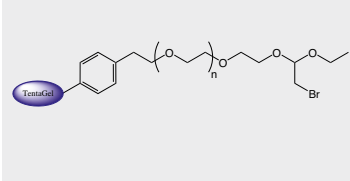
RAL1155		
RAL1155.0005	5 g	120,00
RAL1155.0025	25 g	450,00



9.1.10. Base Resins with Halogens

	Article No.	Quantity	Price	
Polystyrene-Br				BR-5212
Bromo polystyrene	BR-5212.0005	5 g	60,00	
LOADING 1.0-2.6 mmol/g	BR-5212.0025	25 g	160,00	
PARTICLE SIZE 100-200 mesh	BR-5212.0100	100 g	450,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-Br				BR-5264
Bromoethyl polystyrene	BR-5264.0005	5 g	80,00	
LOADING 0.8-1.2 mmol/g	BR-5264.0025	25 g	290,00	
PARTICLE SIZE 100-200 mesh	BR-5264.0100	100 g	1030,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-Br				BR-5265
Bromoethyl polystyrene	BR-5265.0005	5 g	80,00	
LOADING 0.8-1.2 mmol/g	BR-5265.0025	25 g	290,00	
PARTICLE SIZE 200-400 mesh	BR-5265.0100	100 g	1030,00	
CROSSLINKING 1% DVB				
HypoGel® 200 Br				BRH1040
Bromo-PEG200-HypoGel (n=5)	BRH1040.0005	5 g	80,00	
LOADING 0.6-0.9 mmol/g	BRH1040.0025	25 g	290,00	
PARTICLE SIZE 110-150 µm	BRH1040.0100	100 g	1030,00	
HypoGel® 400 Br				BRH1160
Bromo-PEG400-HypoGel (n=10)	BRH1160.0005	5 g	80,00	
LOADING 0.5-0.7 mmol/g	BRH1160.0025	25 g	290,00	
PARTICLE SIZE 110-150 µm	BRH1160.0100	100 g	1030,00	
TG S Br (90µm)				S-30901
TentaGel S Br	S-30901.0005	5 g	120,00	
LOADING 0.2-0.3 mmol/g	S-30901.0025	25 g	440,00	
PARTICLE SIZE 90 µm	S-30901.0100	100 g	1370,00	
TG S Br (130µm)				S-30131
TentaGel S Br	S-30131.0005	5 g	120,00	
LOADING 0.2-0.3 mmol/g	S-30131.0025	25 g	440,00	
PARTICLE SIZE 130 µm	S-30131.0100	100 g	1370,00	

Prices are in EUR, net, exw Germany

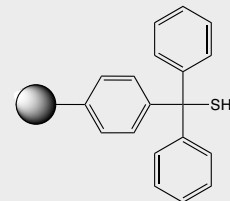
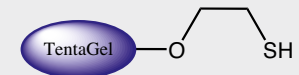
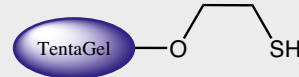
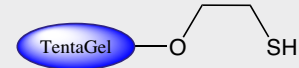
	Article No.	Quantity	Price	
2-Bromoacetal Resin				BR-5061
(2-Bromo-1-ethoxyethoxy)methyl polystyrene	BR-5061.0005	5 g	175,00	
LOADING 0.7-2.0 mmol/g	BR-5061.0025	25 g	650,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
4-Bromoacetal Resin				BR-5225
(4-Bromo-1-methoxybutoxy)methyl polystyrene	BR-5225.0005	5 g	125,00	
PARTICLE SIZE 100-200 mesh	BR-5225.0025	25 g	450,00	
CROSSLINKING 1% DVB				
Polystyrene-COCH₂-Cl				BR-5084
Chloroacetyl polystyrene	BR-5084.0005	5 g	125,00	
LOADING 2.0-6.0 mmol/g	BR-5084.0025	25 g	500,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
HypoGel® 200 Bromo Acetal				BRH1050
HypoGel-PEG200-bromo acetal (n=5)	BRH1050.0005	5 g	140,00	
LOADING 0.75-0.95 mmol/g	BRH1050.0025	25 g	530,00	
PARTICLE SIZE 110-150 µm	BRH1050.0100	100 g	1880,00	
HypoGel® 400 Bromo Acetal				BRH1170
HypoGel-PEG400-bromo acetal (n=10)	BRH1170.0005	5 g	140,00	
LOADING 0.6-0.8 mmol/g	BRH1170.0025	25 g	530,00	
PARTICLE SIZE 110-150 µm	BRH1170.0100	100 g	1880,00	
TG HL Bromo Acetal (110µm)				HL12019
TentaGel HL Bromo Acetal (110µm)	HL12019.0005	5 g	145,00	
LOADING 0.4-0.55 mmol/g	HL12019.0025	25 g	490,00	
PARTICLE SIZE 110 µm	HL12019.0100	100 g	1350,00	

9.1.11. Base Resins containing Sulfur Functions

	Article No.	Quantity	Price	
Polystyrene-Me-SH				BR-5274
Mercaptomethylpolystyrene	BR-5274.0005	5 g	60,00	
LOADING 0.8-1.3 mmol/g	BR-5274.0025	25 g	230,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-SH				BR-5275
Mercaptomethylpolystyrene	BR-5275.0005	5 g	60,00	
LOADING 0.8-1.3 mmol/g	BR-5275.0025	25 g	230,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Et-SH				BR-5270
Mercaptoethylpolystyrene	BR-5270.0005	5 g	150,00	
LOADING 0.8-1.5 mmol/g	BR-5270.0025	25 g	570,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Et-SH				BR-5271
Mercaptoethylpolystyrene	BR-5271.0005	5 g	150,00	
LOADING 0.8-1.5 mmol/g	BR-5271.0025	25 g	570,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
HypoGel® 200 SH				BRH1130
Mercaptoalkyl-PEG200-HypoGel (n=5)	BRH1130.0005	5 g	140,00	
LOADING 0.6-0.9 mmol/g	BRH1130.0025	25 g	520,00	
PARTICLE SIZE 110-150 µm				
HypoGel® 400 SH				BRH1250
Mercaptoalkyl-PEG400-HypoGel (n=10)	BRH1250.0005	5 g	140,00	
LOADING 0.5-0.7 mmol/g	BRH1250.0025	25 g	520,00	
PARTICLE SIZE 110-150 µm				
TG S SH (90µm)				S309040
TentaGel S SH	S309040.0005	5 g	120,00	
LOADING 0.2-0.3 mmol/g	S309040.0025	25 g	380,00	
PARTICLE SIZE 90 µm				

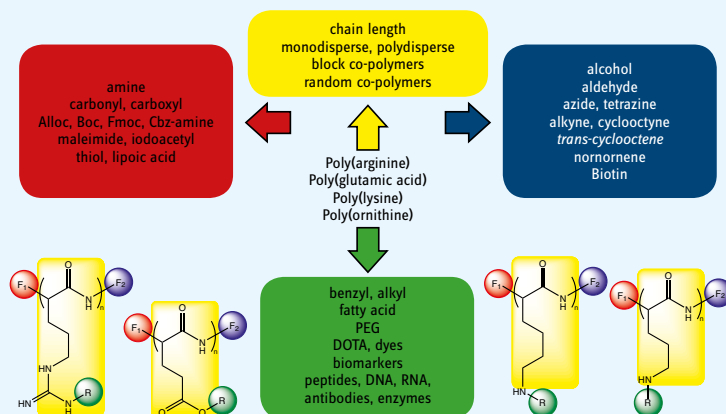
Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price
TG S SH (130µm) S301340			
TentaGel S SH	S301340.0005	5 g	120,00
LOADING 0.2-0.3 mmol/g	S301340.0025	25 g	380,00
PARTICLE SIZE 130 µm			
TG HL SH (75µm) HL12904			
TentaGel HL SH (75µm)	HL12904.0001	1 g	55,00
LOADING 0.4-0.6 mmol/g	HL12904.0005	5 g	145,00
PARTICLE SIZE 75 µm	HL12904.0025	25 g	550,00
TG HL SH (110µm) HL12134			
TentaGel HL SH (110µm)	HL12134.0001	1 g	55,00
LOADING 0.4-0.6 mmol/g	HL12134.0005	5 g	145,00
PARTICLE SIZE 110 µm	HL12134.0025	25 g	550,00
Trt-SH Resin BR-5215			
Thiol Trityl Resin	BR-5215.0001	1 g	75,00
LOADING 0.6-1.2 mmol/g	BR-5215.0005	5 g	250,00
PARTICLE SIZE 100-200 mesh	BR-5215.0025	25 g	1000,00
CROSSLINKING 1% DVB			



Custom Synthesis of Poly(amino acids) from Arg, Glu, Lys, Orn

Poly(amino acids) e.g. from **Arg, Glu, Orn** and **Lys** show the same pallet of diversity as PEGs and PSR enriched by the capability to functionalize the side chain. They gain increasing interest in polymer therapeutics and become a superior alternative as their biodegradability overcomes the limitation of PEG in this aspect. Their inherent side chain functionally expands the field of polymer therapeutics to small molecules and enables in a smart way combination therapy.

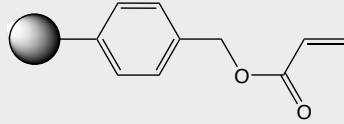
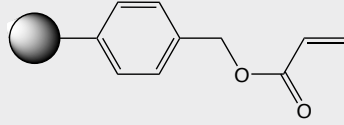
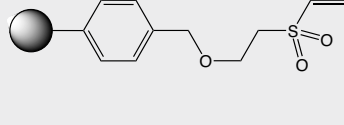
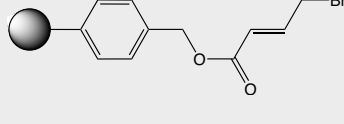
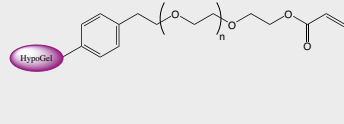
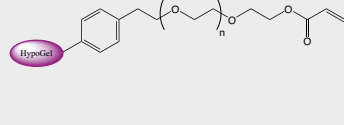
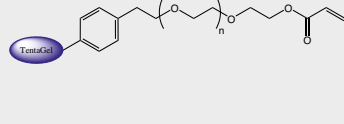


Please provide the following information:

1. Nature of polymer, chain length or molecular weight
2. Random or block-copolymer, functionality of side residues
3. Functionality on head
4. Functionality on tail (pay attention whether it is compatible with the other terminus!)
5. Quantity (grams to kg) and standard custom synthesis or GMP production

Please contact us to define the polymer of your choice.

9.1.12. Base Resins with Vinyl Functions

	Article No.	Quantity	Price	
REM Resin				SR-1036
Acryloylmethyl polystyrene	SR-1036.0005	5 g	80,00	
LOADING 0.8-1.3 mmol/g	SR-1036.0025	25 g	310,00	
PARTICLE SIZE 100-200 mesh	SR-1036.0100	100 g	1040,00	
CROSSLINKING 1% DVB				
REM Resin				SR-1118
Acryloylmethyl polystyrene	SR-1118.0005	5 g	80,00	
LOADING 0.8-1.3 mmol/g	SR-1118.0025	25 g	310,00	
PARTICLE SIZE 200-400 mesh	SR-1118.0100	100 g	1040,00	
CROSSLINKING 1% DVB				
Linear Vinyl Sulfone Resin				BR-5208
Vinylsulfonyl-ethoxymethyl polystyrene	BR-5208.0005	5 g	100,00	
LOADING 0.4-1.2 mmol/g	BR-5208.0025	25 g	400,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Allyl				BR-5248
4-Bromocrotonoyl methylpolystyrene	BR-5248.0001	1 g	75,00	
LOADING 0.5-1.3 mmol/g	BR-5248.0005	5 g	225,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
DESCRIPTION	Resin with a HYCRAM (hydroxyl-crotonyl-aminomethyl) type linker which can be cleaved with tetrakis (triphenylphosphine) palladium (Pd(PPh3)4). It is a non-acidolytic alternative for the synthesis of protected peptide fragments.			
	<u>Literature:</u> Solid Phase Peptide Synthesis of the Fragment BPC 157 of Human Gastric Juice Protein BPC and its Analogues; Zlatko Pflaum and Rudolf Rucman; <i>Acta Chim. Slov.</i> 2005; 52 : 34-39. H. Kunz, B. Dombo; <i>Angew. Chem.</i> 1988; 100 : 733-734.			
HypoGel® 200 REM				BRH1120
Acryloyl-ethyl-PEG200-HypoGel (n=5)	BRH1120.0005	5 g	90,00	
LOADING 0.6-0.8 mmol/g	BRH1120.0025	25 g	330,00	
PARTICLE SIZE 110-150 µm	BRH1120.0100	100 g	1180,00	
HypoGel® 400 REM				BRH1240
Acryloyl-ethyl-PEG400-HypoGel (n=10)	BRH1240.0005	5 g	90,00	
LOADING 0.5-0.6 mmol/g	BRH1240.0025	25 g	330,00	
PARTICLE SIZE 110-150 µm	BRH1240.0100	100 g	1180,00	
TG HL REM (75µm)				HL12018
TentaGel HL REM (75µm)	HL12018.0005	5 g	75,00	
LOADING 0.3-0.5 mmol/g	HL12018.0025	25 g	275,00	
PARTICLE SIZE 75 µm	HL12018.0100	100 g	900,00	
SYNONYMS	Acryloyl TentaGel HL resin			

Prices are in EUR, net, exw Germany

9.1.13. Multifunctional and other Special Resins

Polystyrene-AM-AC-HMPA TR-1000

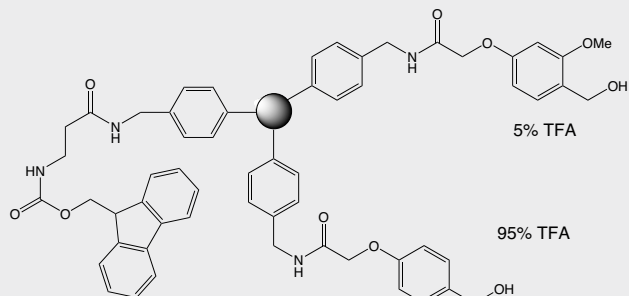
Trifunctionalized Polystyrene-
[Fmoc-beta-Ala/AC-Linker/HMPA-Linker]

LOADING 0.25-0.35 mmol/g

PARTICLE SIZE 75-100 mesh

CROSSLINKING 1% DVB

Article No.	Quantity	Price
TR-1000.0001	1 g	70,00
TR-1000.0005	5 g	270,00
TR-1000.0025	25 g	1070,00



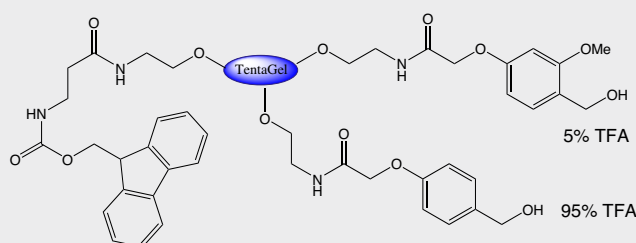
TentaGel-AC-HMPA TR-1200

Trifunctionalized TentaGel-[Fmoc-beta-Ala/AC-Linker/HMPA-Linker]

LOADING 0.1-0.2 mmol/g

PARTICLE SIZE 90 µm

Article No.	Quantity	Price
TR-1200.0001	1 g	70,00
TR-1200.0005	5 g	270,00
TR-1200.0025	25 g	1070,00



Polystyrene-AM-(AC-HMPA)-RAM TR-2000

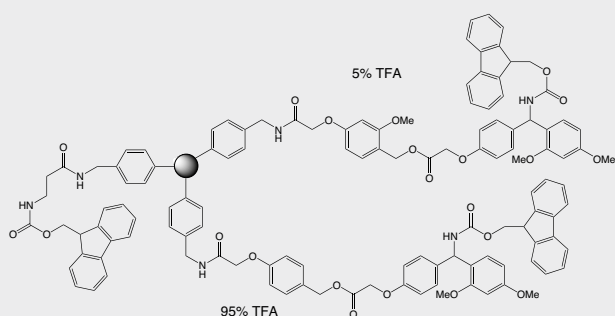
Trifunctionalized Polystyrene-[Fmoc-beta-Ala/AC-Rink-Linker/
HMPA-Rink-Linker]

LOADING 0.15-0.25 mmol/g

PARTICLE SIZE 75-100 mesh

CROSSLINKING 1% DVB

Article No.	Quantity	Price
TR-2000.0001	1 g	110,00
TR-2000.0005	5 g	420,00
TR-2000.0025	25 g	1670,00



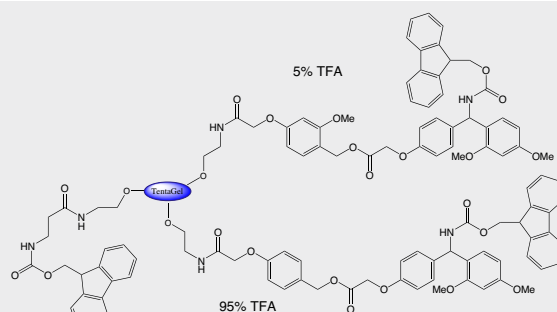
TentaGel-AM-(AC-HMPA)-RAM TR-2100

Trifunctionalized TentaGel-[Fmoc-beta-Ala/AC-Rink-Linker/HMPA-Linker]

LOADING 0.1-0.2 mmol/g

PARTICLE SIZE 90 µm

Article No.	Quantity	Price
TR-2100.0001	1 g	110,00
TR-2100.0005	5 g	420,00
TR-2100.0025	25 g	1670,00



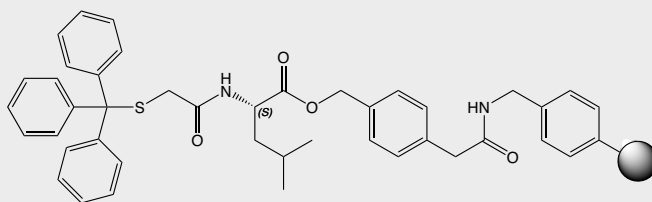
Trt-S-Ac-L-Leu-PAM Resin PAM5795

2-(Tritylmercapto)acetyl-L-leucyl-PAM Resin

LOADING 0.6-0.9 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
PAM5795.0001	1 g	90,00
PAM5795.0005	5 g	340,00

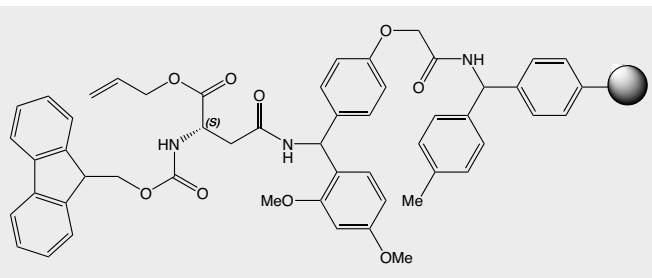
DESCRIPTION This resin can be used for the synthesis of peptide thioesters. After removal of Trt by TFA/DCM the first protected amino acid is loaded with standard protocol, followed by complete peptide synthesis. After completion the peptide thioester resin is treated with HF resulting in the deprotected peptide thioester, which can be used for chemical ligation strategies.

**Fmoc-L-Asn(Rink-Resin)-OAlI CAA1000**

Fmoc-L-Asn(Rink Amide MBHA resin) alpha-allyl ester

LOADING 0.15-0.5 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

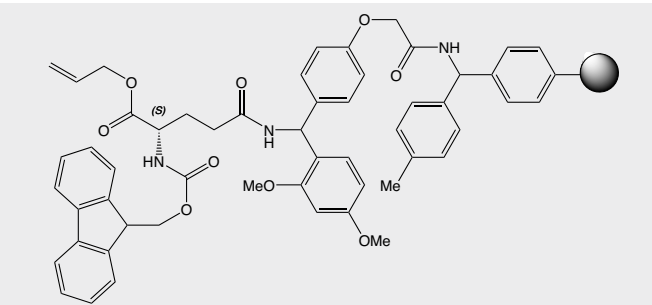
Article No.	Quantity	Price
CAA1000.0000		please inquire

**Fmoc-L-Gln(Rink-Resin)-OAlI RAA1077**

Fmoc-L-Gln(Rink Amide MBHA resin)-alpha-allyl ester

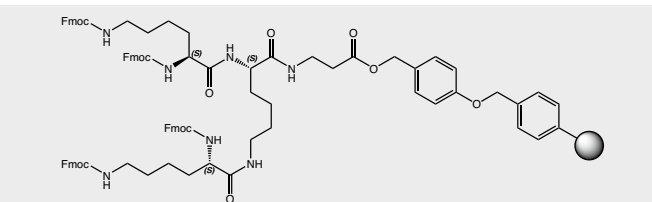
LOADING 0.15-0.5 mmol/g
 PARTICLE SIZE 100-200 mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
RAA1077.0005	5 g	750,00
RAA1077.0025	25 g	2250,00

**(Fmoc)₄-Lys₂-Lys-beta-Ala-Wang PS WAA2014**(Fmoc)₄-Lys₂-Lys-beta-Ala-Wang polystyrene resins

LOADING 0.3-0.6 mmol/g
 PARTICLE SIZE 100-200mesh
 CROSSLINKING 1% DVB

Article No.	Quantity	Price
WAA2014.0001	1 g	440,00



SYNONYMS (Fmoc)₄-Lys₂-Lys-beta-Ala-PHB polystyrene resin, PS PHB cMAP 4 branch

DESCRIPTION This resin is used for the synthesis of Multiple Antigen Peptides (MAP). Acidic treatment liberates the MAP system with beta-alanine at the C-terminus.

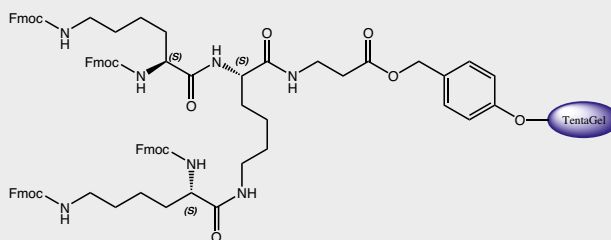
Literature:Hudson D.; *J. Comb. Chem.* 1999; **1**: 403.Lebl M.; *J. Comb. Chem.* 1999; **1**: 3.Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1996; **52**: 4527.Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1997; **53**: 5643.

(Fmoc)₄-Lys₂-Lys-beta-Ala-Wang TG SAL2013

 (Fmoc)₄-Lys₂-Lys-beta-Ala-Wang TentaGel

LOADING 0.3-0.6 mmol/g

Article No.	Quantity	Price
SAL2013.0001	1 g	240,00
SAL2013.0005	5 g	960,00


 SYNONYMS (Fmoc)₄-Lys₂-Lys-beta-Ala-PHB TentaGel, TentaGel cMAP 4 branch beta-Ala

DESCRIPTION This resin is used for the synthesis of Multiple Antigen Peptides (MAP). Acidic treatment liberates the MAP system with beta-alanine at the C-terminus.

Literature:

 Hudson D.; *J. Comb. Chem.* 1999; **1**: 403.

 Lebl M.; *J. Comb. Chem.* 1999; **1**: 3.

 Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1996; **52**: 4527.

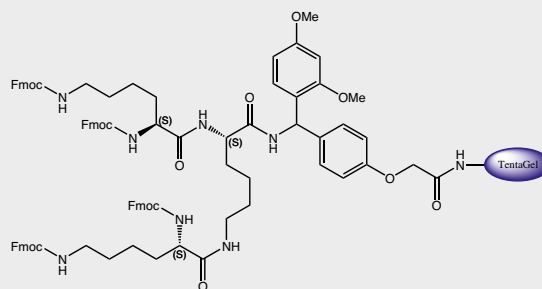
 Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1997; **53**: 5643.

(Fmoc)₄-Lys₂-Lys-Rink TG SAL2023

 (Fmoc)₄-Lys₂-Lys-Rink TG

LOADING 0.3-0.6 mmol/g

Article No.	Quantity	Price
SAL2023.0001	1 g	240,00
SAL2023.0005	5 g	850,00


 SYNONYMS (Fmoc)₄-Lys₂-Lys-Rink-TentaGel

DESCRIPTION This resin is used for the synthesis of Multiple Antigen Peptides (MAP). Acidic treatment liberates the MAP system with beta-alanine amide at the C-terminus.

Literature:

 Hudson D.; *J. Comb. Chem.* 1999; **1**: 403.

 Lebl M.; *J. Comb. Chem.* 1999; **1**: 3.

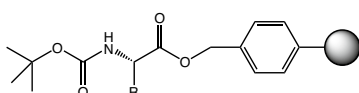
 Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1996; **52**: 4527.

 Hermkens H. H. P., Ottenheijm H. C. J., Rees D.; *Tetrahedron* 1997; **53**: 5643.

9.2. Preloaded Resins

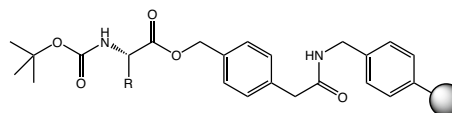
9.2.1. Preloaded Resins for Boc Strategy

Code	Preloaded Merrifield Resin
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MAA5200	Boc-L-Ala-Merrifield Resin
MAA5207	Boc-L-Arg(NO ₂)-Merrifield Resin
MAA5205	Boc-L-Arg(Tos)-Merrifield Resin
MAA5210	Boc-L-Asn-Merrifield Resin
MAA5215	Boc-L-Asp(Bzl)-Merrifield Resin
MAA5216	Boc-L-Asp(cHx)-Merrifield Resin
MAA5221	Boc-L-Cys(4-MeBzl)-Merrifield Resin
MAA5222	Boc-L-Cys(Acm)-Merrifield Resin
MAA5220	Boc-L-Cys(Mob)-Merrifield Resin
MAA5225	Boc-L-Gln-Merrifield Resin
MAA5230	Boc-L-Glu(Bzl)-Merrifield Resin
MAA5231	Boc-L-Glu(cHx)-Merrifield Resin
MAA5239	Boc-Gly-Merrifield Resin
MAA5238	Boc-L-His(Dnp)-Merrifield Resin
MAA5237	Boc-L-His(Tos)-Merrifield Resin
MAA5240	Boc-L-Ile-Merrifield Resin
MAA5245	Boc-L-Leu-Merrifield Resin
MAA5250	Boc-L-Lys(2-Cl-Z)-Merrifield Resin
MAA5252	Boc-L-Lys(Fmoc)-Merrifield Resin
MAA5255	Boc-L-Met-Merrifield Resin
MAA5260	Boc-L-Phe-Merrifield Resin
MAA5265	Boc-L-Pro-Merrifield Resin
MAA5270	Boc-L-Ser(Bzl)-Merrifield Resin
MAA5275	Boc-L-Thr(Bzl)-Merrifield Resin
MAA5281	Boc-L-Trp(CHO)-Merrifield Resin
MAA5280	Boc-L-Trp-Merrifield Resin
MAA5285	Boc-L-Tyr(2,6-Cl ₂ -Bzl)-Merrifield Resin
MAA5286	Boc-L-Tyr(2-Br-Z)-Merrifield Resin
MAA5290	Boc-L-Val-Merrifield Resin

Code	Preloaded PAM Resin
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PAM5600	Boc-L-Ala-PAM Resin
PAM5606	Boc-L-Arg(Mts)-PAM Resin
PAM5605	Boc-L-Arg(Tos)-PAM Resin
PAM5610	Boc-L-Asn-PAM Resin
PAM5615	Boc-L-Asp(Bzl)-PAM Resin
PAM5616	Boc-L-Asp(cHx)-PAM Resin
PAM5620	Boc-L-Cys(4-MeBzl)-PAM Resin
PAM5621	Boc-L-Cys(Mob)-PAM Resin
PAM5622	Boc-L-Cys(Acm)-PAM Resin
PAM5625	Boc-L-Gln-PAM Resin
PAM5630	Boc-L-Glu(Bzl)-PAM Resin
PAM5631	Boc-L-Glu(cHx)-PAM Resin
PAM5635	Boc-Gly-PAM Resin
PAM5638	Boc-L-His(Dnp)-PAM Resin
PAM5637	Boc-L-His(Tos)-PAM Resin
PAM5640	Boc-L-Ile-PAM Resin
PAM5645	Boc-L-Leu-PAM Resin
PAM5650	Boc-L-Lys(2-Cl-Z)-PAM Resin
PAM5651	Boc-L-Lys(Fmoc)-PAM Resin
PAM5655	Boc-L-Met-PAM Resin
PAM5660	Boc-L-Phe-PAM Resin
PAM5665	Boc-L-Pro-PAM Resin
PAM5670	Boc-L-Ser(Bzl)-PAM Resin
PAM5675	Boc-L-Thr(Bzl)-PAM Resin
PAM5681	Boc-L-Trp(CHO)-PAM Resin
PAM5680	Boc-L-Trp-PAM Resin
PAM5662	Boc-L-Tyr(2,6-Cl ₂ -Bzl)-PAM Resin
PAM5686	Boc-L-Tyr(2-Br-Z)-PAM Resin
PAM5690	Boc-L-Val-PAM Resin

Solid phase peptide synthesis has been invented by using Merrifield resins, i.e. substituted methylpolystyrene. Amino acids have been protected at their α -amino function with Boc combined with orthogonal protection (Bzl and others) of the functional side groups. For final cleavage of the peptide, a strong acid like HF is required. Although this methodology produced highly pure peptides, the use is limited today due to the hazardous nature of HF. It almost has completely been substituted by the Fmoc/tBu approach.

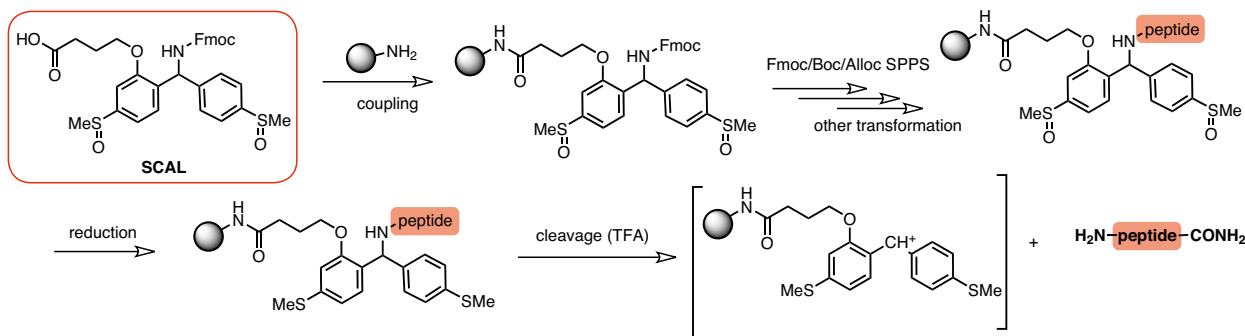
On demand we supply all L- and D-amino acids loaded onto Boc/Bzl compatible resins, like preloaded Merrifield and PAM resins.

Please inquire with type of amino acid, side protection, desired specifications and quantity.

Prices are in EUR, net, exw Germany

New: Safety Catch Acid-Labile Linker (SCAL)

Superior Chemical Stability & Permits Various Orthogonal Solid Phase Approaches



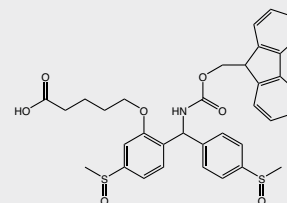
SCAL-Linker

RL-2260

5-(2-(((9H-fluoren-9-yl)methoxy)carbonylamino)(4-(methylsulfinyl)phenyl)methyl)-5-(methylsulfinyl)phenoxy)pentanoic acid

FORMULA $C_{35}H_{35}NO_7S_2$
MOL. WEIGHT 645,78 g/mol

RL-2260.0250	250 mg	250,00
RL-2260.0001	1 g	625,00
RL-2260.0005	5 g	2450,00



SYNONYMS Safety-Catch-Acid-Sensitive Linker, 5-(2-((Fmoc-amino)(4-(methylsulfinyl)phenyl)methyl)-5-(methylsulfinyl)phenoxy)pentanoic acid, Fmoc-amino-di(methylsulfinyl)benzhydryl linker

- Stable to**
- ✓ bases (aq. 0.5% NaOH, DBU in chloroform, 20-50% piperidine in DMF)
 - ✓ acids (25-55% TFA/DCM, neat TFA 2h, HF at 0°C for 2h)
 - ✓ Alloc/OAll deprotecting procedures
 - ✓ hydrostannylation (Bu_3SnH , $Pd(OAc)_2$, PPh_3 in AcOH and DCM)

When attached to a water compatible support like sepharose, the linker allows complete solid-phase chemical ligation after removing AcM protecting group from cysteine using $Hg(II)(AcO)_2$ in aq. acetic acid (pH 4).

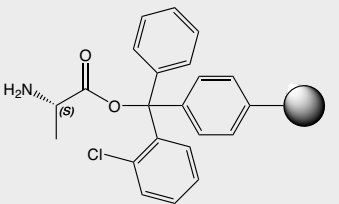
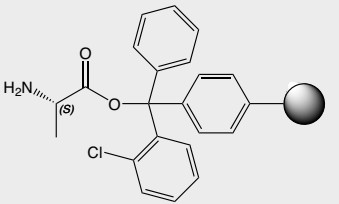
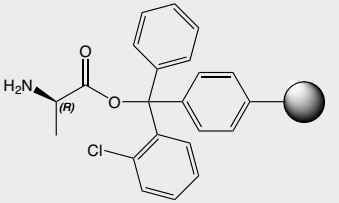
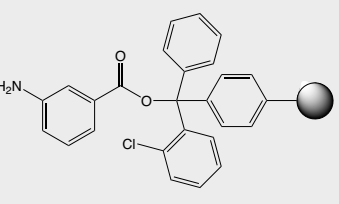
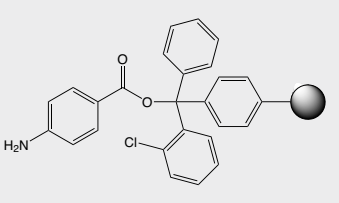
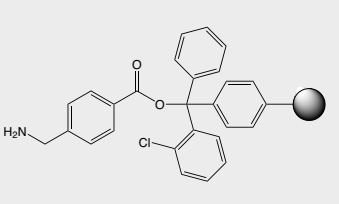
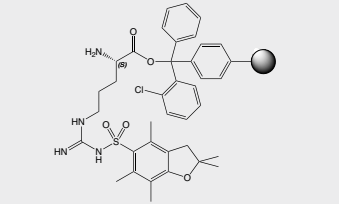
Final detachment occurs by reduction of sulfoxides followed by acidolysis providing C-terminal peptide amides [92]:

- ★ One-step procedures: $NH_4I/TFA/DMS$ (0°C to rt over 1h) or $1M SiCl_4(TFA/thioanisole/cresol/ethandithiol)$ (0°C, 2h)
- ★ Two-step procedures:
 - a) reductive activation
($TMSiCl/PPH_3$ in DCM or THF, 20% $(EtO)_2P(S)SH/DMPU$, 0,1% HBr in AcOH (rt, 2h)
 - b) acidolytic cleavage by a variety of TFA/scavengers mixes
(TFA/water, 95:5; TFA/DCM/water/ Bu_3SiH , 85:10:2.5:2.5; TFA/m-cresole; TFA/DCM, 1:1)

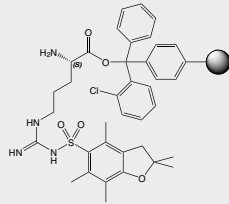
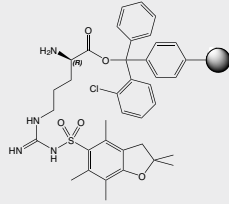
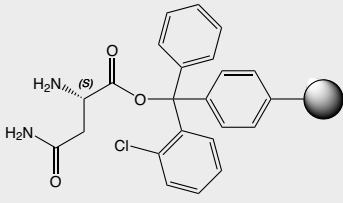
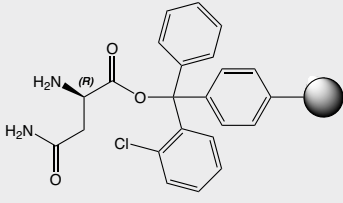
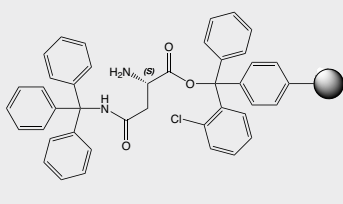
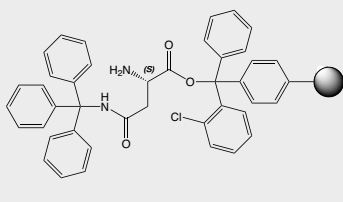
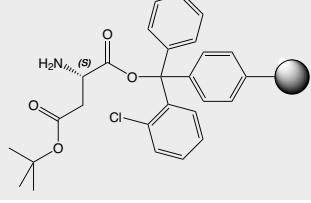
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9.2.2. Preloaded Trityl Resins

	Article No.	Quantity	Price	
H-L-Ala-2CT Resin				RAA1005
H-L-Ala-2-chlorotrityl resin	RAA1005.0005	5 g	50,00	
LOADING 0.5-1.0 mmol/g	RAA1005.0025	25 g	180,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Ala-2CT Resin				RAA1006
H-L-Ala-2-chlorotrityl resin	RAA1006.0005	5 g	50,00	
LOADING 0.3-1.1 mmol/g	RAA1006.0025	25 g	180,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Ala-2CT Resin				RAA1004
H-D-Ala-2-chlorotrityl resin	RAA1004.0005	5 g	170,00	
LOADING 0.5-1.0 mmol/g	RAA1004.0025	25 g	670,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
3-Aminobenzoic acid-2CT Resin				RAA1010
3-Aminobenzoic acid-2-chlorotrityl resin	RAA1010.0005	5 g	140,00	
LOADING > 0.5 mmol/g	RAA1010.0025	25 g	540,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
4-Aminobenzoic acid-2CT Resin				RAA1015
4-Aminobenzoic acid-2-chlorotrityl resin	RAA1015.0005	5 g	140,00	
LOADING > 0.5 mmol/g	RAA1015.0025	25 g	540,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
4-Aminomethylbenzoic acid-2CT Resin				RAA1020
4-Aminomethylbenzoic acid-2-chlorotrityl resin	RAA1020.0005	5 g	120,00	
LOADING > 0.5 mmol/g	RAA1020.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Arg(Pbf)-2CT Resin				RAA1030
H-L-Arg(Pbf)-2-chlorotrityl resin	RAA1030.0005	5 g	140,00	
LOADING > 0.5 mmol/g	RAA1030.0025	25 g	560,00	
PARTICLE SIZE 100-200 mesh	RAA1030.0100	100 g	1580,00	
CROSSLINKING 1% DVB				

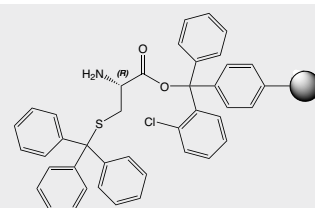
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	Article No.	Quantity	Price	
H-L-Arg(Pbf)-2CT Resin				RAA1031
H-L-Arg(Pbf)-2-chlorotrityl resin	RAA1031.0005	5 g	140,00	
LOADING > 0.5 mmol/g	RAA1031.0025	25 g	560,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Arg(Pbf)-2CT Resin				RAA1029
H-D-Arg(Pbf)-2-chlorotrityl resin	RAA1029.0001	1 g	120,00	
LOADING > 0.5 mmol/g	RAA1029.0005	5 g	340,00	
PARTICLE SIZE 100-200 mesh	RAA1029.0025	25 g	1270,00	
CROSSLINKING 1% DVB				
H-L-Asn-2CT Resin				RAA1044
H-L-Asn-2-chlorotrityl resin	RAA1044.0005	5 g	50,00	
LOADING > 0.5 mmol/g	RAA1044.0025	25 g	180,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-D-Asn-2CT Resin				RAA1043
H-D-Asn-2-chlorotrityl resin	RAA1043.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1043.0025	25 g	890,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Asn(Trt)-2CT Resin				RAA1045
H-L-Asn(Trt)-2-chlorotrityl resin	RAA1045.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1045.0025	25 g	320,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Asn(Trt)-2CT Resin				RAA1046
H-L-Asn(Trt)-2-chlorotrityl resin	RAA1046.0005	5 g	80,00	
LOADING 0.3 - 1.1 mmol/g	RAA1046.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-L-Asp(tBu)-2CT Resin				RAA1047
H-L-Asp(tBu)-2-chlorotrityl resin	RAA1047.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1047.0025	25 g	320,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
SYNONYMS	H-L-Asp(OtBu)-2CT Resin, H-Asp(OtBu)-2CT Resin			

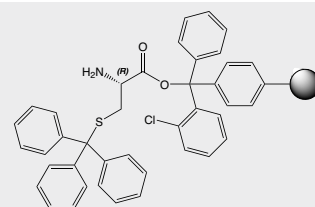
	Article No.	Quantity	Price	
H-L-Asp(tBu)-2CT Resin				RAA1048
H-L-Asp(tBu)-2-chlorotrityl resin	RAA1048.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1048.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
SYNONYMS H-L-Asp(OtBu)-2CT Resin, H-Asp(OtBu)-2CT Resin				
H-D-Asp(tBu)-2CT Resin				RAA1049
H-D-Asp(tBu)-2-chlorotrityl resin	RAA1049.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1049.0025	25 g	890,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
SYNONYMS H-D-Asp(OtBu)-2CT Resin				
Fmoc-L-Asp(2CT resin)-NH₂				RAA2610
Fmoc-L-Aspartate alpha-amide-beta-(2-chlorotrityl resin) ester	RAA2610.0000	please inquire		
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Cys(Clt)-2CT Resin				RAA1050
H-L-Cys(Clt)-2-chlorotrityl resin	RAA1050.0005	5 g	170,00	
LOADING > 0.4 mmol/g	RAA1050.0025	25 g	670,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
DESCRIPTION The Clt (2-chlorotrityl) protecting group is more stable than the commonly used Trt group and is best deprotected by oxidative methods with iodine resulting in a simultaneous disulfide bridge formation. It is therefore best used in the synthesis of cyclic peptides with several disulfide bridges in particular for the synthesis of the second S-S bridge.				
Literature: Aletras A., Barlos K. et al; <i>Int. J. Pept. Protein Res.</i> 1995; 45(5) : 488-496. Barlos K. et al; <i>Int. J. Pept. Protein Res.</i> 1991; 38(6) : 555-561. Sarah L.M. et al, in „Fmoc Solid Phase Synthesis. A practical approach“, Ed.: Chan W.C.; White P.D. Oxford University Press 2000, page 177.				
H-L-Cys(Mmt)-2CT Resin				RAA1055
H-L-Cys(Mmt)-2-chlorotrityl resin	RAA1055.0005	5 g	120,00	
LOADING > 0.4 mmol/g	RAA1055.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
DESCRIPTION The Mmt function can be cleaved selectively in the presence of t-butyl type protecting groups and of 4-methyl benzhydryl resin (see BR-1180), Wang resin or Rink amide MBHA resin (Product code BR-1300, BR-1305, BR-1360, BR-1365, and BR-1366). The liberated thiol function then selectively reacts with various compounds, such as haloacyl or haloalkyl PEG derivatives or can be oxidized, in order to form disulfide bridges. Cleavage conditions for Cys(Mmt): 1 g of resin-bound peptide is washed 4 times with dichloromethane. Then 10 ml of an 1.1 % TFA mixture of dichloromethane/triethylsilane (97:3) are added and the mixture is shaken for 10 min at RT and filtered. The cleavage is repeated 1-3 times until no more Mmt can be detected. The Mmt detection is easily performed by applying a spot of the cleavage mixture on a TLC plate and exposes it a few seconds to gaseous HCl coming from conc. HCl. The presence of the Mmt-cation is visualized immediately by the orange coloration of the spot. The highly acid labile S-Mmt group is preferred over the StBu group for the SPS of S-palmitoyl transmembrane peptides since the latter give rise to quantitative desulphurization during resin deprotection.				
Literature: K. Barlos et al. in "Peptides 1992, Proc. 22nd European Peptide Symposium", C.H. Schneider and A. N. Eberle (Eds), ESCOM, Leiden 1993. K. Barlos, et al.; <i>Int. J. Peptide Protein Res.</i> 1996; 47 : 148. D. T. S. Rijkers, et al.; <i>Tetrahedron Letters</i> 2005; 46 : 3341-3345.				

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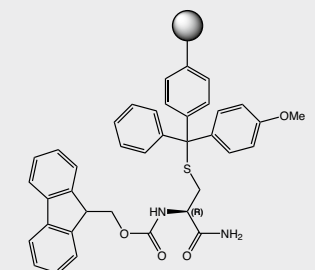
	Article No.	Quantity	Price
H-L-Cys(Trt)-2CT Resin RAA1065			
H-L-Cys(Trt)-2-chlorotrityl resin	RAA1065.0005	5 g	80,00
LOADING > 0.4 mmol/g	RAA1065.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



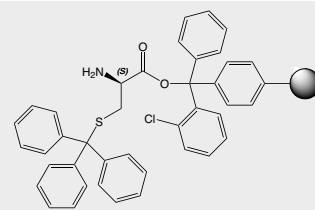
H-L-Cys(Trt)-2CT Resin RAA1066			
H-L-Cys(Trt)-2-chlorotrityl resin	RAA1066.0005	5 g	80,00
LOADING > 0.4 mmol/g	RAA1066.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



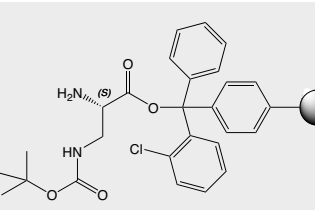
Fmoc-L-Cys(Mmt resin)-NH₂ RAA2620			
Fmoc-L-Cysteine alpha-amide-S-(4-methoxytrityl resin)	RAA2620.0000	please inquire	
LOADING ca. 0.5 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



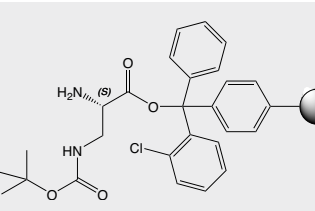
H-D-Cys(Trt)-2CT Resin RAA1060			
H-D-Cys(Trt)-2-chlorotrityl resin	RAA1060.0005	5 g	170,00
LOADING > 0.4 mmol/g	RAA1060.0025	25 g	670,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



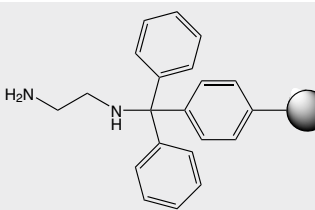
H-L-Dap(Boc)-2CT Resin RAA1330			
H-L-Dap(Boc)-2-chlorotrityl resin	RAA1330.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1330.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



H-L-Dap(Boc)-2CT Resin RAA1331			
H-L-Dap(Boc)-2-chlorotrityl resin	RAA1331.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1331.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



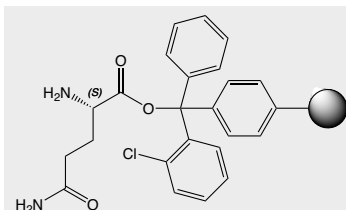
1,2-Diaminoethane-trityl resin RDA1020			
LOADING > 0.3 mmol/g	RDA1020.0025	25 g	140,00
PARTICLE SIZE 200-400 mesh	RDA1020.0100	100 g	420,00
CROSSLINKING 1% DVB			



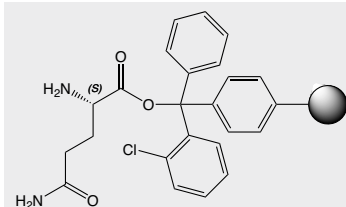
	Article No.	Quantity	Price	
H-L-Glu(2CT Resin)-OAlI RAA1078				
H-L-Glu(2-chlorotrityl resin)-alpha-allyl ester	RAA1078.0000	please inquire		
LOADING > 0.3 mmol/g				
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
H-L-Glu(2CT resin)-OtBu RAA2700				
L-Glutamate alpha-t-butyl ester-gamma-(2-chlorotrityl resin) ester	RAA2700.0000	please inquire		
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
H-L-Glu(tBu)-2CT Resin RAA1075				
H-L-Glu(tBu)-2-chlorotrityl resin	RAA1075.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1075.0025	25 g	320,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
SYNONYMS	H-L-Glu(OtBu)-2CT Resin, H-Glu(OtBu)-2CT Resin			
H-L-Glu(tBu)-2CT Resin RAA1076				
H-L-Glu(tBu)-2-chlorotrityl resin	RAA1076.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1076.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB				
SYNONYMS	H-L-Glu(OtBu)-2CT Resin, H-Glu(OtBu)-2CT Resin			
H-D-Glu(tBu)-2CT Resin RAA1074				
H-D-Glu(tBu)-2-chlorotrityl resin	RAA1074.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1074.0025	25 g	890,00	
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				
SYNONYMS	H-D-Glu(OtBu)-2CT Resin			
Fmoc-L-Glu(2CT resin)-NH₂ RAA2630				
Fmoc-L-Glutamate alpha-amide-gamma-(2-chlorotrityl resin) ester	RAA2630.0000	please inquire		
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB				

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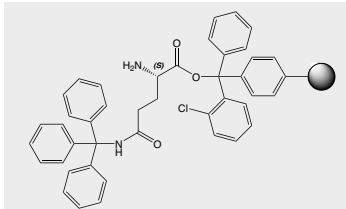
	Article No.	Quantity	Price
H-L-Gln-2CT Resin RAA1085			
H-L-Gln-2-chlorotrityl resin	RAA1085.0005	5 g	50,00
PARTICLE SIZE 100-200 mesh	RAA1085.0025	25 g	180,00
CROSSLINKING 1% DVB			



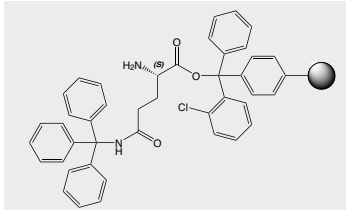
H-L-Gln-2CT Resin RAA1086			
H-L-Gln-2-chlorotrityl resin	RAA1086.0005	5 g	50,00
LOADING > 0.4 mmol/g	RAA1086.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



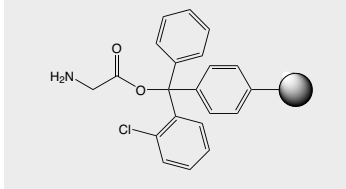
H-L-Gln(Trt)-2CT Resin RAA1087			
H-L-Gln(Trt)-2-chlorotrityl resin	RAA1087.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1087.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



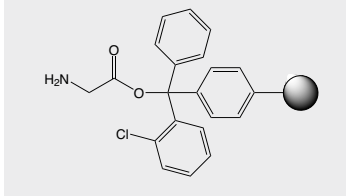
H-L-Gln(Trt)-2CT Resin RAA1088			
H-L-Gln(Trt)-2-chlorotrityl resin	RAA1088.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1088.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



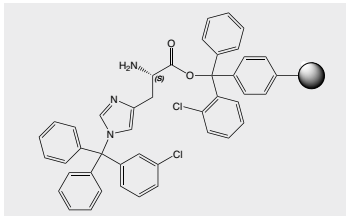
H-Gly-2CT Resin RAA1040			
H-Gly-2-chlorotrityl resin	RAA1040.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1040.0025	25 g	180,00
PARTICLE SIZE 100-200 mesh	RAA1040.0100	100 g	540,00
CROSSLINKING 1% DVB			



H-Gly-2CT Resin RAA1041			
H-Gly-2-chlorotrityl resin	RAA1041.0005	5 g	50,00
LOADING 0.3 - 1.1 mmol/g	RAA1041.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh	RAA1041.0100	100 g	540,00
CROSSLINKING 1% DVB			



H-L-His(Cl)t-2CT Resin RAA1093			
H-L-His(Cl)t-2-chlorotrityl resin	RAA1093.0005	5 g	140,00
LOADING > 0.4 mmol/g	RAA1093.0025	25 g	540,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



DESCRIPTION The Clt (2-chlorotrityl) protecting group is more stable than the commonly used Trt group and is being deprotected with 95%TFA in dichloromethane. The main application is in peptide synthesis, whenever certain treatments and modifications of the peptide are being applied, where the standard His(Trt) protection is too labile.

Literature:

Aletras A., Barlos K. et al; *Int. J. Pept. Protein Res.* 1995; **45(5)**: 488-496.

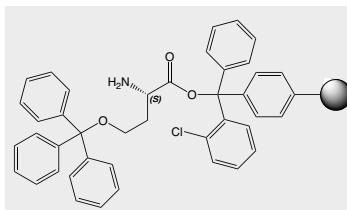
Barlos K. et al; *Int. J. Pept. Protein Res.* 1991; **38(6)**: 555-561.

Sarah L.M. et al, in „Fmoc Solid Phase Synthesis. A practical approach“, Ed.: Chan W.C.; White P.D. Oxford University Press 2000, page 177.

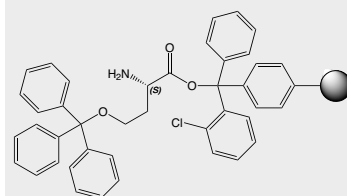
	Article No.	Quantity	Price			
H-L-His(Mmt)-2CT Resin				RAA1095		
H-L-His(Mmt)-2-chlorotrityl resin	RAA1095.0005	5 g	120,00			
LOADING	> 0.4 mmol/g			RAA1095.0025	25 g	450,00
PARTICLE SIZE	100-200 mesh					
CROSSLINKING	1% DVB					
H-L-His(Mtt)-2CT Resin				RAA1097		
H-L-His(Mtt)-2-chlorotrityl resin	RAA1097.0005	5 g	140,00			
LOADING	> 0.5 mmol/g			RAA1097.0025	25 g	560,00
PARTICLE SIZE	100-200 mesh					
CROSSLINKING	1% DVB					
H-L-His(Trt)-2CT Resin				RAA1105		
H-L-His(Trt)-2-chlorotrityl resin	RAA1105.0005	5 g	80,00			
LOADING	> 0.4 mmol/g			RAA1105.0025	25 g	320,00
PARTICLE SIZE	100-200 mesh					
CROSSLINKING	1% DVB					
H-L-His(Trt)-2CT Resin				RAA1106		
H-L-His(Trt)-2-chlorotrityl resin	RAA1106.0005	5 g	120,00			
LOADING	> 0.4 mmol/g			RAA1106.0025	25 g	450,00
PARTICLE SIZE	200-400 mesh					
CROSSLINKING	1% DVB					
H-D-His(Trt)-2CT Resin				RAA1100		
H-D-His(Trt)-2-chlorotrityl resin	RAA1100.0001	1 g	70,00			
LOADING	> 0.5 mmol/g			RAA1100.0005	5 g	270,00
PARTICLE SIZE	100-200 mesh			RAA1100.0025	25 g	1070,00
CROSSLINKING	1% DVB					
Fmoc-L-His(Mmt resin)-NH₂				RAA2640		
Fmoc-L-Histidine alpha-amide-Nim-(4-methoxytrityl resin)	RAA2640.0000		please inquire			
LOADING	ca. 0.5 mmol/g					
PARTICLE SIZE	100-200 mesh					
CROSSLINKING	1% DVB					
H-L-Hse(Me)-2CT Resin				RAA1115		
H-L-Hse(Me)-2-chlorotrityl resin	RAA1115.0001	1 g	170,00			
LOADING	> 0.4 mmol/g			RAA1115.0005	5 g	670,00
PARTICLE SIZE	100-200 mesh					
CROSSLINKING	1% DVB					

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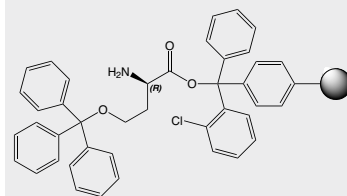
	Article No.	Quantity	Price
H-L-Hse(Trt)-2CT Resin RAA1125			
H-L-Hse(Trt)-2-chlorotrityl resin	RAA1125.0005	5 g	120,00
LOADING > 0.4 mmol/g	RAA1125.0025	25 g	450,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



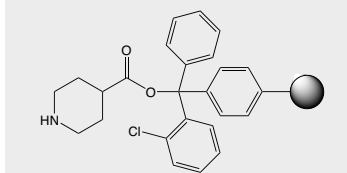
H-L-Hse(Trt)-2CT Resin RAA1126			
H-L-Hse(Trt)-2-chlorotrityl resin	RAA1126.0005	5 g	120,00
LOADING > 0.4 mmol/g	RAA1126.0025	25 g	450,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



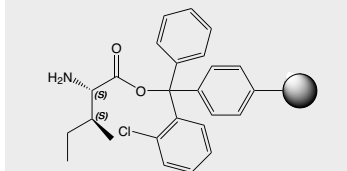
H-D-Hse(Trt)-2CT Resin RAA1120			
H-D-Hse(Trt)-2-chlorotrityl resin	RAA1120.0001	1 g	230,00
LOADING > 0.4 mmol/g	RAA1120.0005	5 g	890,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



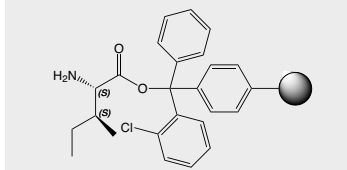
H-Inp-2CT Resin RAA1210			
4-Piperidine carboxylic acid-2-chlorotrityl resin (Isonipetric)	RAA1210.0005	5 g	120,00
LOADING > 0.5 mmol/g	RAA1210.0025	25 g	450,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



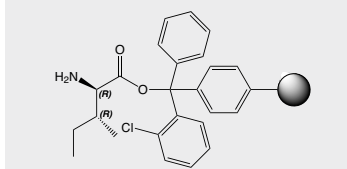
H-L-Ile-2CT Resin RAA1135			
H-L-Ile-2-chlorotrityl resin	RAA1135.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1135.0025	25 g	180,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



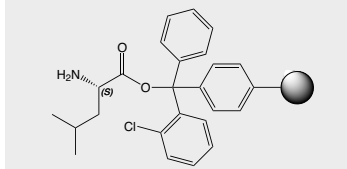
H-L-Ile-2CT Resin RAA1136			
H-L-Ile-2-chlorotrityl resin	RAA1136.0005	5 g	50,00
LOADING 0.3 -1.1 mmol/g	RAA1136.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



H-D-allo-Ile-2CT Resin RAA1134			
H-D-allo-Ile-2-chlorotrityl resin	RAA1134.0005	5 g	170,00
LOADING > 0.5 mmol/g	RAA1134.0025	25 g	670,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



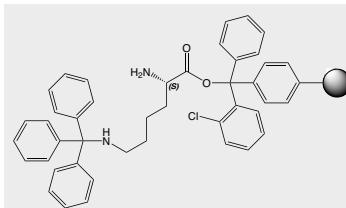
H-L-Leu-2CT Resin RAA1145			
H-L-Leu-2-chlorotrityl resin	RAA1145.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1145.0025	25 g	180,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



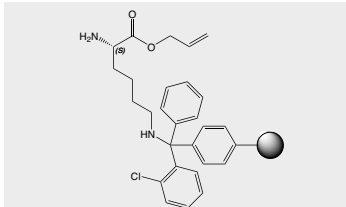
	Article No.	Quantity	Price	
H-L-Leu-2CT Resin				RAA1146
H-L-Leu-2-chlorotrityl resin	RAA1146.0005	5 g	50,00	
LOADING > 0.5 mmol/g	RAA1146.0025	25 g	180,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Leu-2CT Resin				RAA1144
H-D-Leu-2-chlorotrityl resin	RAA1144.0005	5 g	170,00	
LOADING > 0.5 mmol/g	RAA1144.0025	25 g	670,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Lys(Boc)-2CT Resin				RAA1155
H-L-Lys(Boc)-2-chlorotrityl resin	RAA1155.0005	5 g	200,00	
LOADING > 0.5 mmol/g	RAA1155.0025	25 g	800,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Lys(Boc)-2CT Resin				RAA1156
H-L-Lys(Boc)-2-chlorotrityl resin	RAA1156.0005	5 g	80,00	
LOADING 0.3-1.1 mmol/g	RAA1156.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Lys(Boc)-2CT Resin				RAA1154
H-D-Lys(Boc)-2-chlorotrityl resin	RAA1154.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1154.0025	25 g	890,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Lys(Mtt)-2CT Resin				RAA1165
H-L-Lys(Mtt)-2-chlorotrityl resin	RAA1165.0005	5 g	120,00	
LOADING > 0.4 mmol/g	RAA1165.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-D-Lys(Mtt)-2CT Resin				RAA1160
H-D-Lys(Mtt)-2-chlorotrityl resin	RAA1160.0001	1 g	140,00	
LOADING > 0.4 mmol/g	RAA1160.0005	5 g	540,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Lys(Trt)-2CT Resin				RAA1167
H-L-Lys(Trt)-2-chlorotrityl resin	RAA1167.0005	5 g	120,00	
LOADING > 0.5 mmol/g	RAA1167.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				

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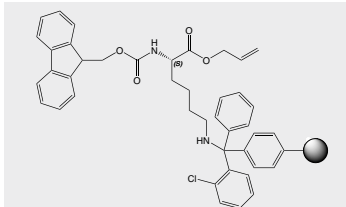
	Article No.	Quantity	Price
H-L-Lys(Trt)-2CT Resin			RAA1168
H-L-Lys(Trt)-2-chlorotrityl resin	RAA1168.0005	5 g	140,00
LOADING > 0.5 mmol/g	RAA1168.0025	25 g	560,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



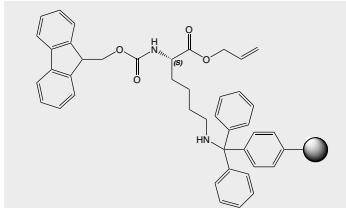
H-L-Lys(2CT-Resin)-OAll			RAA1320
H-L-Lys(2-chlorotrityl resin)-OAll	RAA1320.0000		please inquire
LOADING 0.7 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



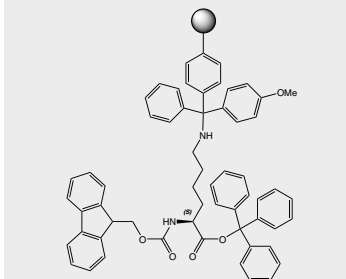
Fmoc-L-Lys(2CT-Resin)-OAll			RAA1325
Fmoc-L-Lys(2-Chloro-Trityl-Resin)-OAll	RAA1325.0000		please inquire
LOADING > 0.5 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



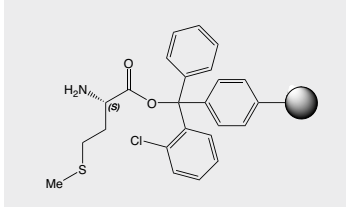
Fmoc-L-Lys(Trt-Resin)-OAll			CAA1008
Fmoc-L-Lys(Trityl-Resin)-OAll	CAA1008.0000		please inquire
LOADING 0.15-0.5 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



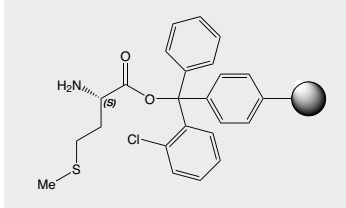
Fmoc-L-Lys(Mmt resin)-O-Trt			RAA2660
Fmoc-L-Lysine alpha-trityl ester-N-epsilon-(4-methoxytrityl resin)	RAA2660.0000		please inquire
LOADING ca. 0.5 mmol/g			
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



H-L-Met-2CT Resin			RAA1175
H-L-Met-2-chlorotrityl resin	RAA1175.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1175.0025	25 g	180,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



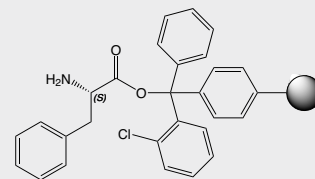
H-L-Met-2CT Resin			RAA1176
H-L-Met-2-chlorotrityl resin	RAA1176.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1176.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



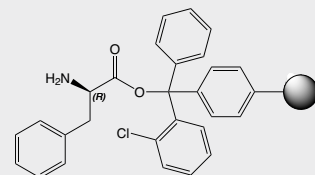
	Article No.	Quantity	Price		
H-D-Met-2CT Resin				RAA1170	
H-D-Met-2-chlorotrityl resin	RAA1170.0005	5 g	170,00		
LOADING	> 0.5 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
H-L-Mim-2CT Resin				RAA4000	
Mimosine-2-chlorotrityl resin	RAA4000.0100	100 mg	600,00		
LOADING	ca. 0.45 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
DESCRIPTION	<p>Natural Mimosine extracted from <i>Leucaena leucocephala</i> de Wit is a sustainable starting material for development of drugs or cosmetics. Mimosine inhibits tyrosinase, cyclooxygenase and lipoxygenase thus cosmetic application for whitening is one of the big interests. Hydroxy keton derivatives (like mimosine) induce apoptosis and have potential as anti-tumor agents. Mim exhibits no significant cytotoxicity nor acute dermal toxicity. This building block opens the field to use mimosine in peptides or organic molecules as key fragment and equip the drug molecule with the mimosine specific properties.</p> <p><u>Literature:</u> Nokihara, K, <i>et al.</i>, Preparative scale isolation, purification and derivatization of mimosine, a non-proteinogenic amino acid; <i>Amino Acids</i> 2011; Published online 13 Oct 2011. DOI 10.1007/s00726-011-1104-y. Nokihara, K, <i>et al.</i>, A Non-proteinogenic Amino Acid, Mimosine and Mimosyl Peptides for Cosmeceutical Ingredients; <i>Peptide Science</i> 2010, <i>The Japanese Peptide Society</i> 2011; 282.</p>				
Fmoc-L-Nle-2CT Resin				RAA6220	
Fmoc-L-Nle-2-chlorotrityl resin	RAA6220.0005	5 g	260,00		
LOADING	0.7-1.1 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
H-L-Orn(Boc)-2CT Resin				RAA1185	
H-L-Orn(Boc)-2-chlorotrityl resin	RAA1185.0005	5 g	170,00		
LOADING	> 0.4 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
H-L-Orn(Boc)-2CT Resin				RAA1186	
H-L-Orn(Boc)-2-chlorotrityl resin	RAA1186.0005	5 g	170,00		
LOADING	> 0.4 mmol/g				
PARTICLE SIZE	200-400 mesh				
CROSSLINKING	1% DVB				
H-L-Orn(Mtt)-2CT Resin				RAA1195	
H-L-Orn(Mtt)-2-chlorotrityl resin	RAA1195.0005	5 g	170,00		
LOADING	> 0.4 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
H-L-Phe-2CT Resin				RAA1205	
H-L-Phe-2-chlorotrityl resin	RAA1205.0005	5 g	50,00		
LOADING	> 0.5 mmol/g				
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				

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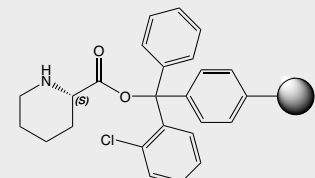
	Article No.	Quantity	Price
H-L-Phe-2CT Resin RAA1206			
H-L-Phe-2-chlorotrityl resin	RAA1206.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1206.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



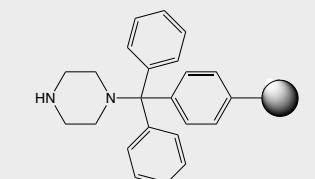
H-D-Phe-2CT Resin RAA1200			
H-D-Phe-2-chlorotrityl resin	RAA1200.0005	5 g	170,00
LOADING > 0.5 mmol/g	RAA1200.0025	25 g	670,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



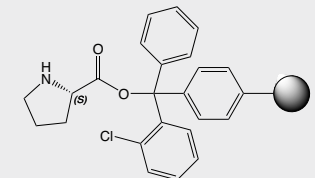
H-L-Pip-2CT Resin RAA5962			
H-L-Pipecolic acid-2-chlorotrityl resin	RAA5962.0005	5 g	375,00
LOADING > 0.5 mmol/g	RAA5962.0025	25 g	1350,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



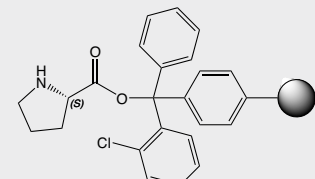
Piperazine-trityl resin RDA1065			
LOADING > 0.3 mmol/g	RDA1065.0005	5 g	230,00
PARTICLE SIZE 200-400 mesh	RDA1065.0025	25 g	890,00
CROSSLINKING 1% DVB			



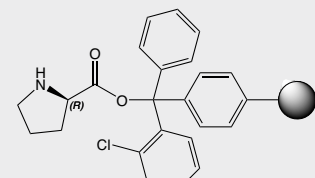
H-L-Pro-2CT Resin RAA1220			
H-L-Pro-2-chlorotrityl resin	RAA1220.0005	5 g	50,00
LOADING > 0.5 mmol/g	RAA1220.0025	25 g	180,00
PARTICLE SIZE 100-200 mesh	RAA1220.0100	100 g	540,00
CROSSLINKING 1% DVB			



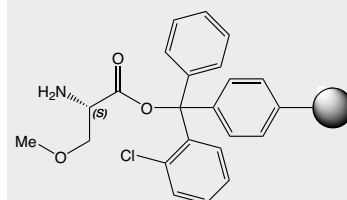
H-L-Pro-2CT Resin RAA1221			
H-L-Pro-2-chlorotrityl resin	RAA1221.0005	5 g	50,00
LOADING 0.3-1.1 mmol/g	RAA1221.0025	25 g	180,00
PARTICLE SIZE 200-400 mesh	RAA1221.0100	100 g	540,00
CROSSLINKING 1% DVB			

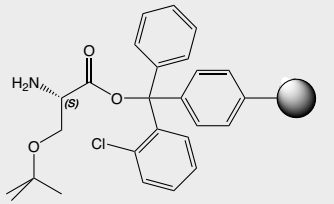
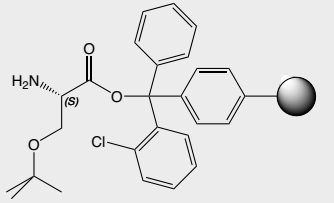
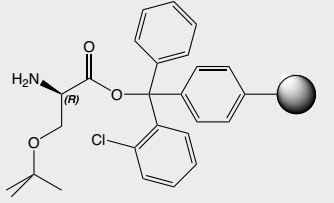
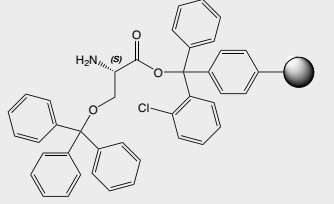
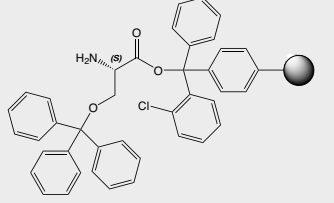
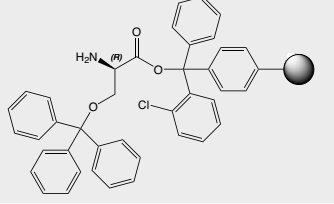
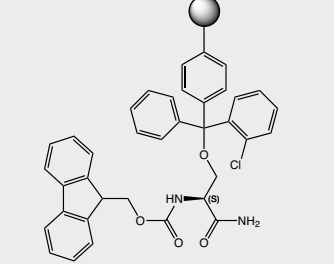


H-D-Pro-2CT Resin RAA6225			
H-D-Pro-2-chlorotrityl resin	RAA6225.0005	5 g	375,00
LOADING > 0.5 mmol/g	RAA6225.0025	25 g	1350,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



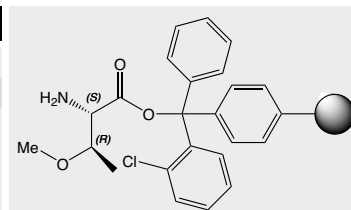
H-L-Ser(Me)-2CT Resin RAA1232			
H-L-Ser(Me)-2-chlorotrityl resin	RAA1232.0001	1 g	170,00
LOADING > 0.5 mmol/g	RAA1232.0005	5 g	670,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



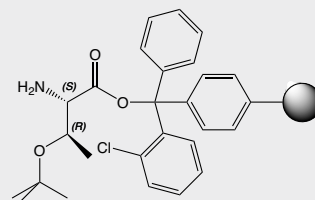
	Article No.	Quantity	Price	
H-L-Ser(tBu)-2CT Resin				RAA1230
H-L-Ser(tBu)-2-chlorotrityl resin	RAA1230.0005	5 g	80,00	
LOADING 0.3-1.1 mmol/g	RAA1230.0025	25 g	320,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Ser(tBu)-2CT Resin				RAA1231
H-L-Ser(tBu)-2-chlorotrityl resin	RAA1231.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1231.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Ser(tBu)-2CT Resin				RAA1229
H-D-Ser(tBu)-2-chlorotrityl resin	RAA1229.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1229.0025	25 g	890,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Ser(Trt)-2CT Resin				RAA1240
H-L-Ser(Trt)-2-chlorotrityl resin	RAA1240.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1240.0025	25 g	320,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Ser(Trt)-2CT Resin				RAA1241
H-L-Ser(Trt)-2-chlorotrityl resin	RAA1241.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1241.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Ser(Trt)-2CT Resin				RAA1235
H-D-Ser(Trt)-2-chlorotrityl resin	RAA1235.0001	1 g	120,00	
LOADING > 0.5 mmol/g	RAA1235.0005	5 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Fmoc-L-Ser(2CT resin)-NH₂				RAA2670
Fmoc-L-Serine alpha-amide-O-(2-chlorotrityl resin)	RAA2670.0000		please inquire	
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				

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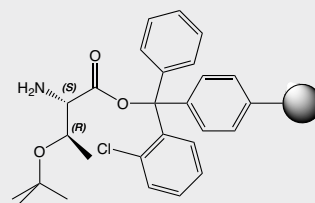
	Article No.	Quantity	Price
H-L-Thr(Me)-2CT Resin RAA1252			
H-L-Thr(Me)-2-chlorotrityl resin	RAA1252.0001	1 g	170,00
LOADING > 0.5 mmol/g	RAA1252.0005	5 g	670,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



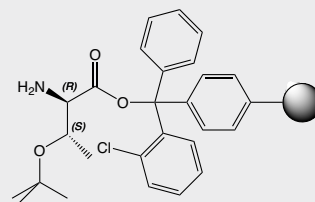
H-L-Thr(tBu)-2CT Resin RAA1250			
H-L-Thr(tBu)-2-chlorotrityl resin	RAA1250.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1250.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



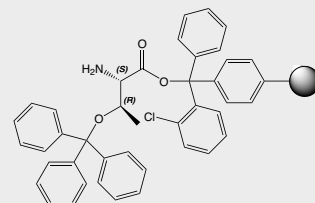
H-L-Thr(tBu)-2CT Resin RAA1251			
H-L-Thr(tBu)-2-chlorotrityl resin	RAA1251.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1251.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



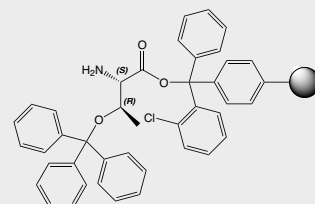
H-D-Thr(tBu)-2CT Resin RAA1249			
H-D-Thr(tBu)-2-chlorotrityl resin	RAA1249.0005	5 g	230,00
LOADING > 0.5 mmol/g	RAA1249.0025	25 g	890,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



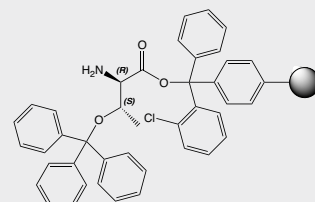
H-L-Thr(Trt)-2CT Resin RAA1260			
H-L-Thr(Trt)-2-chlorotrityl resin	RAA1260.0005	5 g	80,00
LOADING > 0.4 mmol/g	RAA1260.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			

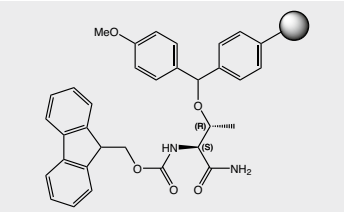
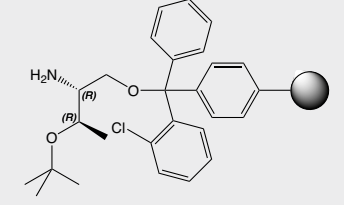
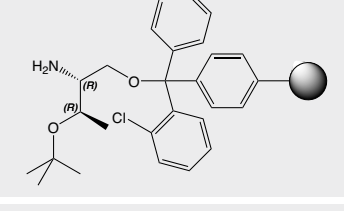
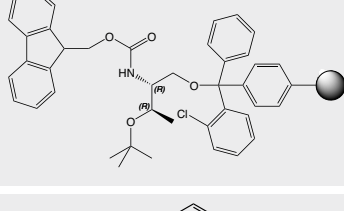
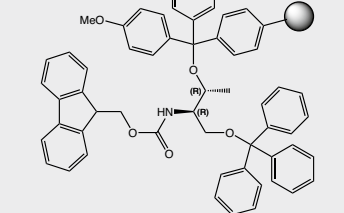
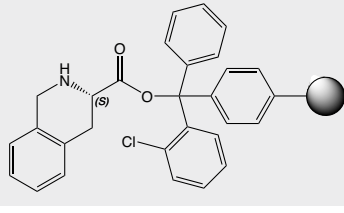
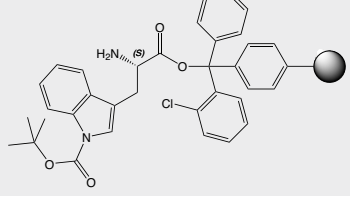


H-L-Thr(Trt)-2CT Resin RAA1261			
H-L-Thr(Trt)-2-chlorotrityl resin	RAA1261.0005	5 g	80,00
LOADING > 0.4 mmol/g	RAA1261.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



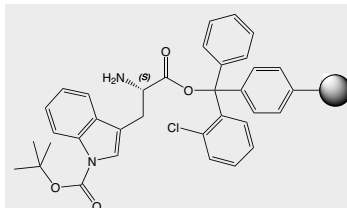
H-D-Thr(Trt)-2CT Resin RAA1255			
H-D-Thr(Trt)-2-chlorotrityl resin	RAA1255.0001	1 g	140,00
LOADING > 0.4 mmol/g	RAA1255.0005	5 g	540,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



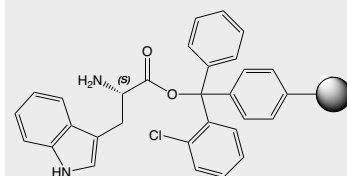
	Article No.	Quantity	Price	
Fmoc-L-Thr(MeO-BH resin)-NH₂				RAA2680
Fmoc-L-Threonine alpha-amide-O-(4-methoxybenzhydryl resin)	RAA2680.0000		please inquire	
LOADING	ca. 0.5 mmol/g			
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			
H-L-Thr(tBu)-ol-2CT Resin				RAL1114
L-Thr(tBu)-ol-2-chlorotrityl resin	RAL1114.0000		please inquire	
LOADING	> 0.5 mmol/g			
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			
H-L-Thr(tBu)-ol-2CT Resin				RAL1115
L-Thr(tBu)-ol-2-chlorotrityl resin	RAL1115.0000		please inquire	
LOADING	> 0.6 mmol/g			
PARTICLE SIZE	200-400 mesh			
CROSSLINKING	1% DVB			
Fmoc-L-Thr(tBu)-ol-2CT Resin				RAL1126
Fmoc-L-Thr(tBu)-ol-2-chlorotrityl resin	RAL1126.0000		please inquire	
LOADING	0.4-0.8 mmol/g			
PARTICLE SIZE	200-400 mesh			
CROSSLINKING	1% DVB			
Fmoc-L-Threoninol(Mmt resin)-OTrt				RAA3280
Fmoc-Threoninol(4-methoxytrityl resin)-OTrt	RAA3280.0000		please inquire	
PARTICLE SIZE	200-400mesh			
CROSSLINKING	1% DVB			
DESCRIPTION Starting building block for the synthesis of Octreotide.				
H-L-Tic-2CT Resin				RAA5977
H-L-Tetrahydroisoquinoline-3-carboxylic acid-2-chlorotrityl resin	RAA5977.0005	5 g	375,00	
LOADING	> 0.5 mmol/g	RAA5977.0025	25 g 1350,00	
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			
H-L-Trp(Boc)-2CT Resin				RAA1305
H-L-Trp(Boc)-2-chlorotrityl resin	RAA1305.0005	5 g	80,00	
LOADING	> 0.5 mmol/g	RAA1305.0025	25 g 320,00	
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			

Prices are in EUR, net, exw Germany

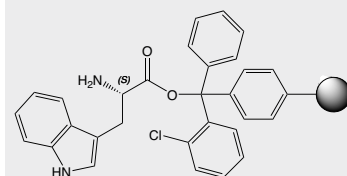
	Article No.	Quantity	Price
H-L-Trp(Boc)-2CT Resin RAA1306			
H-L-Trp(Boc)-2-chlorotrityl resin	RAA1306.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1306.0025	25 g	320,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



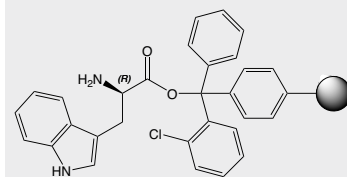
H-L-Trp-2CT Resin RAA1270			
H-L-Trp-2-chlorotrityl resin	RAA1270.0005	5 g	140,00
LOADING 0.5-1.0 mmol/g	RAA1270.0025	25 g	540,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



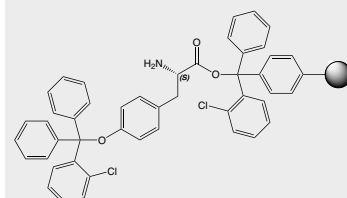
H-L-Trp-2CT Resin RAA1271			
H-L-Trp-2-chlorotrityl resin	RAA1271.0005	5 g	140,00
LOADING 0.5-1.0 mmol/g	RAA1271.0025	25 g	540,00
PARTICLE SIZE 200-400 mesh			
CROSSLINKING 1% DVB			



H-D-Trp-2-CT Resin RAA1265			
H-D-Trp-2-chlorotrityl resin	RAA1265.0001	1 g	120,00
LOADING 0.4-0.8 mmol/g	RAA1265.0005	5 g	450,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



H-L-Tyr(Cl)-2CT Resin RAA1290			
H-L-Tyr(Cl)-2-chlorotrityl resin	RAA1290.0005	5 g	250,00
LOADING > 0.4 mmol/g	RAA1290.0025	25 g	1000,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



DESCRIPTION The Clt (2-chlorotrityl) protecting group can selectively be removed by treatment with 1% TFA in dichloromethane and silane scavenger. The partially deprotected amino acid can be used for further derivatization, like phosphorylation, sulfonation, PEGylation, or conjugation with glycol building blocks or dyes.

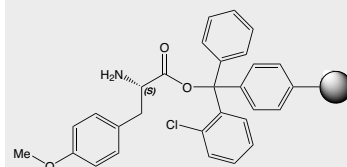
Literature:

Aletras A., Barlos K. et al; *Int. J. Pept. Protein Res.* 1995; **45(5)**: 488-496.

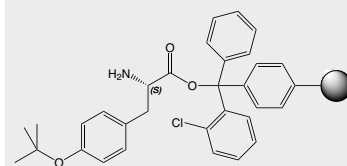
Barlos K. et al; *Int. J. Pept. Protein Res.* 1991; **38(6)**: 555-561.

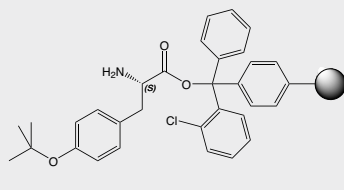
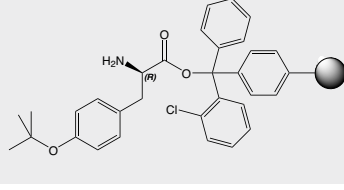
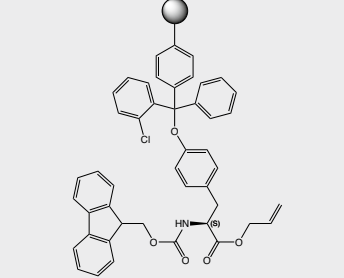
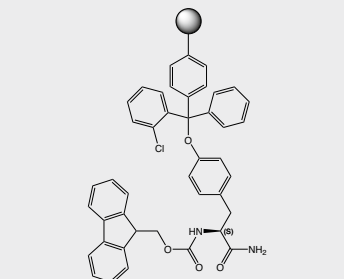
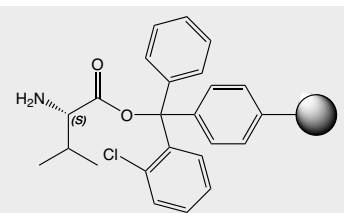
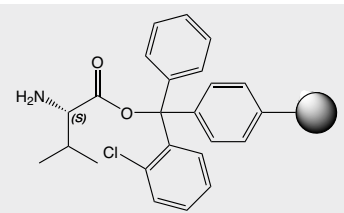
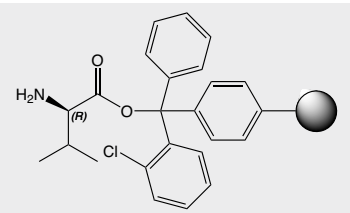
Sarah L.M. et al, in „Fmoc Solid Phase Synthesis. A practical approach“, Ed.: Chan W.C.; White P.D. Oxford University Press 2000, page 177.

H-L-Tyr(Me)-2CT Resin RAA1292			
H-L-Tyr(Me)-2-chlorotrityl resin	RAA1292.0005	5 g	250,00
LOADING > 0.5 mmol/g	RAA1292.0025	25 g	1000,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			



H-L-Tyr(tBu)-2CT Resin RAA1280			
H-L-Tyr(tBu)-2-chlorotrityl resin	RAA1280.0005	5 g	80,00
LOADING > 0.5 mmol/g	RAA1280.0025	25 g	320,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			

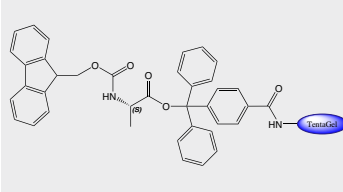
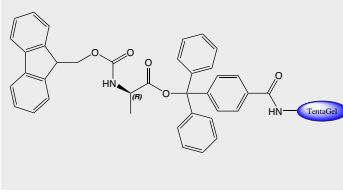
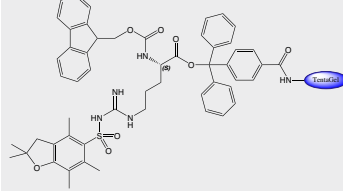
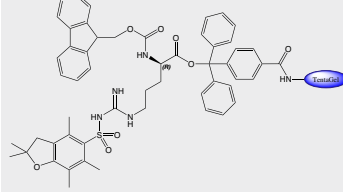
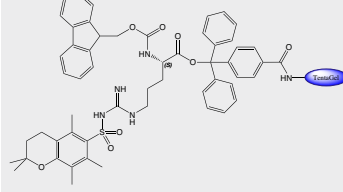
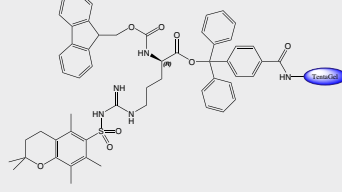


	Article No.	Quantity	Price	
H-L-Tyr(tBu)-2CT Resin				RAA1281
H-L-Tyr(tBu)-2-chlorotrityl resin	RAA1281.0005	5 g	80,00	
LOADING > 0.5 mmol/g	RAA1281.0025	25 g	320,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Tyr(tBu)-2CT Resin				RAA1282
H-D-Tyr(tBu)-2-chlorotrityl resin	RAA1282.0005	5 g	230,00	
LOADING > 0.5 mmol/g	RAA1282.0025	25 g	890,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
Fmoc-L-Tyr(2CT resin)-OAlI				RAA6230
Fmoc-L-Tyrosine-O-(2-chlorotrityl resin) alpha allyl ester	RAA6230.0000	please inquire		
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Fmoc-L-Tyr(2CT resin)-NH₂				RAA2690
Fmoc-L-Tyrosine alpha-amide-O-(2-chlorotrityl resin)	RAA2690.0000	please inquire		
LOADING ca. 0.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Val-2CT Resin				RAA1300
H-L-Val-2-chlorotrityl resin	RAA1300.0005	5 g	50,00	
LOADING > 0.5 mmol/g	RAA1300.0025	25 g	180,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
H-L-Val-2CT Resin				RAA1301
H-L-Val-2-chlorotrityl resin	RAA1301.0005	5 g	50,00	
LOADING > 0.5 mmol/g	RAA1301.0025	25 g	180,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
H-D-Val-2CT Resin				RAA1299
H-D-Val-2-chlorotrityl resin	RAA1299.0005	5 g	170,00	
LOADING > 0.5 mmol/g	RAA1299.0025	25 g	670,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				

Prices are in EUR, net, exw Germany

9.2.3. Preloaded Trityl-TentaGel® Resins for the Synthesis of Protected Peptides

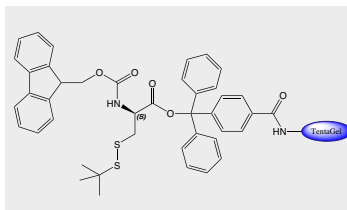
TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 3000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.

	Article No.	Quantity	Price	
Fmoc-L-Ala-Trt TG				SAL1201
Fmoc-L-Ala-Trityl TentaGel S	SAL1201.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1201.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1201.0025	25 g	980,00	
Fmoc-D-Ala-Trt TG				SAD1201
Fmoc-D-Ala-Trityl TentaGel S	SAD1201.0001	1 g	90,00	
LOADING 0.18-0.25 mmol/g	SAD1201.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1201.0025	25 g	1460,00	
Fmoc-L-Arg(Pbf)-Trt TG				SAL1202
Fmoc-L-Arg(Pbf)-Trityl TentaGel S	SAL1202.0001	1 g	110,00	
LOADING 0.16-0.25 mmol/g	SAL1202.0005	5 g	420,00	
PARTICLE SIZE 90 µm	SAL1202.0025	25 g	1670,00	
Fmoc-D-Arg(Pbf)-Trt TG				SAD1202
Fmoc-D-Arg(Pbf)-Trityl TentaGel S	SAD1202.0001	1 g	110,00	
LOADING 0.16-0.25 mmol/g	SAD1202.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1202.0025	25 g	1860,00	
Fmoc-L-Arg(Pmc)-Trt TG				SAL1203
Fmoc-L-Arg(Pmc)-Trityl TentaGel S	SAL1203.0001	1 g	110,00	
LOADING 0.16-0.25 mmol/g	SAL1203.0005	5 g	420,00	
PARTICLE SIZE 90 µm	SAL1203.0025	25 g	1670,00	
Fmoc-D-Arg(Pmc)-Trt TG				SAD1203
Fmoc-D-Arg(Pmc)-Trityl TentaGel S	SAD1203.0001	1 g	110,00	
LOADING 0.16-0.25 mmol/g	SAD1203.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1203.0025	25 g	1860,00	

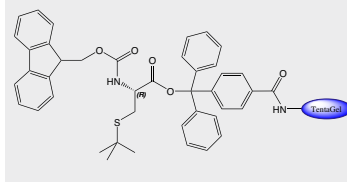
	Article No.	Quantity	Price	
Fmoc-L-Asn(Trt)-Trt TG				SAL1204
Fmoc-L-Asn(Trt)-Trityl TentaGel S	SAL1204.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1204.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1204.0025	25 g	1160,00	
Fmoc-D-Asn(Trt)-Trt TG				SAD1204
Fmoc-D-Asn(Trt)-Trityl TentaGel S	SAD1204.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1204.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1204.0025	25 g	1860,00	
Fmoc-L-Asp(tBu)-Trt TG				SAL1205
Fmoc-L-Asp(tBu)-Trityl TentaGel S	SAL1205.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1205.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1205.0025	25 g	1160,00	
SYNONYMS Fmoc-L-Asp(OtBu)-Trt TentaGel, Fmoc-Asp(OtBu)-Trt TentaGel				
Fmoc-D-Asp(tBu)-Trt TG				SAD1205
Fmoc-D-Asp(tBu)-Trityl TentaGel S	SAD1205.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1205.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1205.0025	25 g	1860,00	
SYNONYMS Fmoc-D-Asp(OtBu)-Trt TentaGel				
Fmoc-L-Cys(Acm)-Trt TG				SAL1207
Fmoc-L-Cys(S-Acm)-Trityl TentaGel S	SAL1207.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1207.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1207.0025	25 g	1160,00	
Fmoc-D-Cys(Acm)-Trt TG				SAD1207
Fmoc-D-Cys(S-Acm)-Trityl TentaGel S	SAD1207.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1207.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1207.0025	25 g	1860,00	
Fmoc-L-Cys(SS-tBu)-Trt TG				SAL1209
Fmoc-L-Cys(S-S-tBu)-Trityl TentaGel S	SAL1209.0001	1 g	100,00	
LOADING 0.18-0.25 mmol/g	SAL1209.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1209.0025	25 g	1580,00	

Prices are in EUR, net, exw Germany

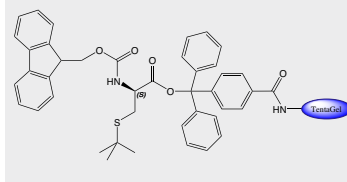
	Article No.	Quantity	Price
Fmoc-D-Cys(SS-tBu)-Trt TG SAD1209			
Fmoc-D-Cys(S-S-tBu)-Trityl TentaGel S	SAD1209.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1209.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1209.0025	25 g	1860,00



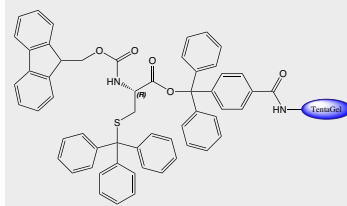
Fmoc-L-Cys(S-tBu)-Trt TG SAL1208			
Fmoc-L-Cys(S-tBu)-Trityl TentaGel S	SAL1208.0001	1 g	80,00
LOADING 0.18-0.25 mmol/g	SAL1208.0005	5 g	290,00
PARTICLE SIZE 90 µm	SAL1208.0025	25 g	1160,00



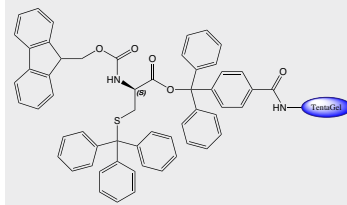
Fmoc-D-Cys(S-tBu)-Trt TG SAD1208			
Fmoc-D-Cys(S-tBu)-Trityl TentaGel S	SAD1208.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1208.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1208.0025	25 g	1860,00



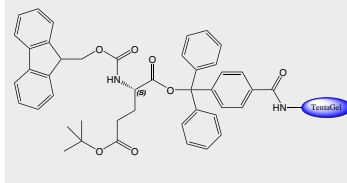
Fmoc-L-Cys(Trt)-Trt TG SAL1206			
Fmoc-L-Cys(Trt)-Trityl TentaGel S	SAL1206.0001	1 g	80,00
LOADING 0.18-0.25 mmol/g	SAL1206.0005	5 g	290,00
PARTICLE SIZE 90 µm	SAL1206.0025	25 g	1160,00



Fmoc-D-Cys(Trt)-Trt TG SAD1206			
Fmoc-D-Cys(Trt)-Trityl TentaGel S	SAD1206.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1206.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1206.0025	25 g	1860,00

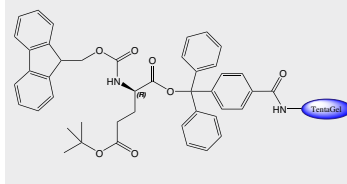


Fmoc-L-Glu(tBu)-Trt TG SAL1212			
Fmoc-L-Glu(tBu)-Trityl TentaGel S	SAL1212.0001	1 g	80,00
LOADING 0.18-0.25 mmol/g	SAL1212.0005	5 g	290,00
PARTICLE SIZE 90 µm	SAL1212.0025	25 g	1160,00

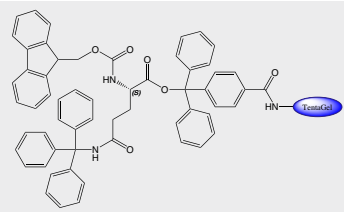
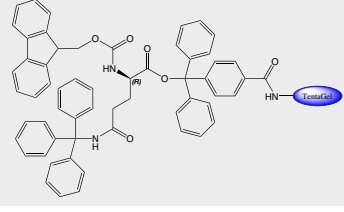
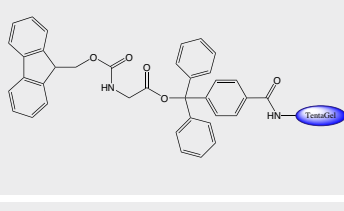
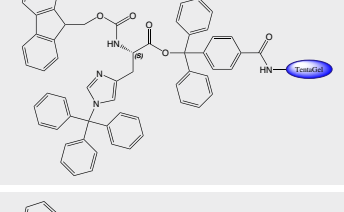
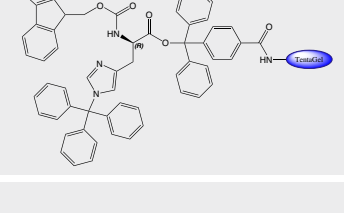
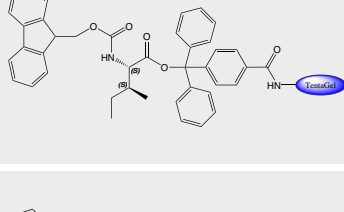
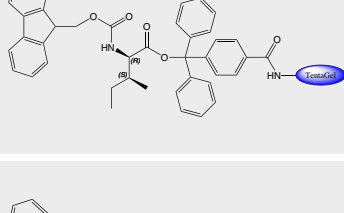
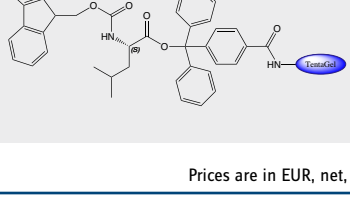


SYNONYMS Fmoc-L-Glu(OtBu)-Trt TentaGel, Fmoc-Glu(OtBu)-Trt TentaGel

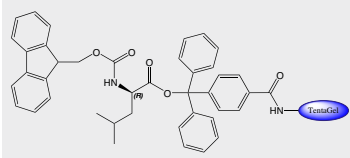
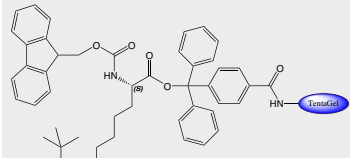
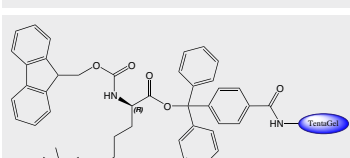
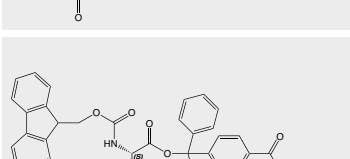
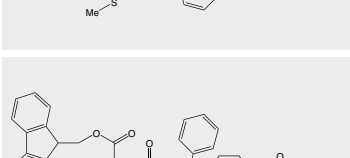
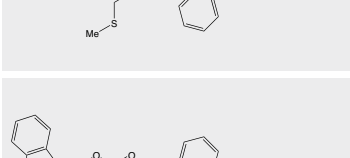
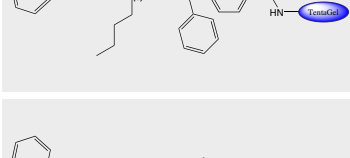
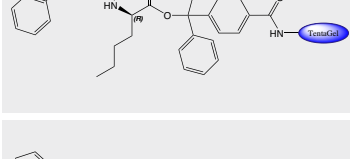
Fmoc-D-Glu(tBu)-Trt TG SAD1212			
Fmoc-D-Glu(tBu)-Trityl TentaGel S	SAD1212.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1212.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1212.0025	25 g	1860,00



SYNONYMS Fmoc-D-Glu(OtBu)-Trt TentaGel

	Article No.	Quantity	Price	
Fmoc-L-Gln(Trt)-Trt TG				SAL1210
Fmoc-L-Gln(Trt)-Trityl TentaGel S	SAL1210.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1210.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1210.0025	25 g	1160,00	
Fmoc-D-Gln(Trt)-Trt TG				SAD1210
Fmoc-D-Gln(Trt)-Trityl TentaGel S	SAD1210.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1210.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1210.0025	25 g	1860,00	
Fmoc-Gly-Trt TG				SAL1213
Fmoc-Gly-Trityl TentaGel S	SAL1213.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1213.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1213.0025	25 g	980,00	
Fmoc-L-His(Trt)-Trt TG				SAL1214
Fmoc-L-His(Trt)-Trityl TentaGel S	SAL1214.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1214.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1214.0025	25 g	1160,00	
Fmoc-D-His(Trt)-Trt TG				SAD1214
Fmoc-D-His(Trt)-Trityl TentaGel S	SAD1214.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1214.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1214.0025	25 g	1860,00	
Fmoc-L-Ile-Trt TG				SAL1215
Fmoc-L-Ile-Trityl TentaGel S	SAL1215.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1215.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1215.0025	25 g	980,00	
Fmoc-D-Ile-Trt TG				SAD1215
Fmoc-D-Ile-Trityl TentaGel S	SAD1215.0001	1 g	210,00	
LOADING 0.18-0.25 mmol/g	SAD1215.0005	5 g	800,00	
PARTICLE SIZE 90 µm	SAD1215.0025	25 g	3170,00	
Fmoc-L-Leu-Trt TG				SAL1216
Fmoc-L-Leu-Trityl TentaGel S	SAL1216.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1216.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1216.0025	25 g	980,00	

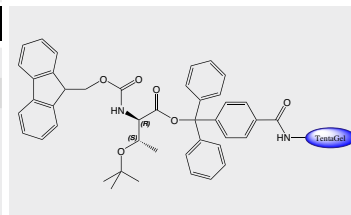
Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price	
Fmoc-D-Leu-Trt TG				SAD1216
Fmoc-D-Leu-Trityl TentaGel S	SAD1216.0001	1 g	90,00	
LOADING 0.18-0.25 mmol/g	SAD1216.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1216.0025	25 g	1460,00	
Fmoc-L-Lys(Boc)-Trt TG				SAL1217
Fmoc-L-Lys(Boc)-Trityl TentaGel S	SAL1217.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1217.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1217.0025	25 g	1160,00	
Fmoc-D-Lys(Boc)-Trt TG				SAD1217
Fmoc-D-Lys(Boc)-Trityl TentaGel S	SAD1217.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1217.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1217.0025	25 g	1860,00	
Fmoc-L-Met-Trt TG				SAL1218
Fmoc-L-Met-Trityl TentaGel S	SAL1218.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1218.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1218.0025	25 g	980,00	
Fmoc-D-Met-Trt TG				SAD1218
Fmoc-D-Met-Trityl TentaGel S	SAD1218.0001	1 g	90,00	
LOADING 0.18-0.25 mmol/g	SAD1218.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1218.0025	25 g	1460,00	
Fmoc-L-Nle-Trt TG				SAL1219
Fmoc-L-Nle-Trityl TentaGel S	SAL1219.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1219.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1219.0025	25 g	1160,00	
Fmoc-D-Nle-Trt TG				SAD1219
Fmoc-D-Nle-Trityl TentaGel S	SAD1219.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1219.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1219.0025	25 g	1860,00	
Fmoc-L-Orn(Boc)-Trt TG				SAL1220
Fmoc-L-Orn(Boc)-Trityl TentaGel S	SAL1220.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAL1220.0005	5 g	420,00	
PARTICLE SIZE 90 µm	SAL1220.0025	25 g	1670,00	

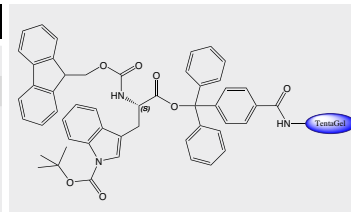
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Fmoc-D-Orn(Boc)-Trt TG				SAD1220
Fmoc-D-Orn(Boc)-Trityl TentaGel S	SAD1220.0001	1 g	140,00	
LOADING 0.18-0.25 mmol/g	SAD1220.0005	5 g	560,00	
PARTICLE SIZE 90 µm	SAD1220.0025	25 g	2220,00	
Fmoc-L-Phe-Trt TG				SAL1221
Fmoc-L-Phe-Trityl TentaGel S	SAL1221.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1221.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1221.0025	25 g	980,00	
Fmoc-D-Phe-Trt TG				SAD1221
Fmoc-D-Phe-Trityl TentaGel S	SAD1221.0001	1 g	90,00	
LOADING 0.18-0.25 mmol/g	SAD1221.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1221.0025	25 g	1460,00	
Fmoc-L-Pro-Trt TG				SAL1222
Fmoc-L-Pro-Trityl TentaGel S	SAL1222.0001	1 g	70,00	
LOADING 0.18-0.25 mmol/g	SAL1222.0005	5 g	250,00	
PARTICLE SIZE 90 µm	SAL1222.0025	25 g	980,00	
Fmoc-D-Pro-Trt TG				SAD1222
Fmoc-D-Pro-Trityl TentaGel S	SAD1222.0001	1 g	90,00	
LOADING 0.18-0.25 mmol/g	SAD1222.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1222.0025	25 g	1460,00	
Fmoc-L-Ser(tBu)-Trt TG				SAL1223
Fmoc-L-Ser(tBu)-Trityl TentaGel S	SAL1223.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1223.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1223.0025	25 g	1160,00	
Fmoc-D-Ser(tBu)-Trt TG				SAD1223
Fmoc-D-Ser(tBu)-Trityl TentaGel S	SAD1223.0001	1 g	110,00	
LOADING 0.18-0.25 mmol/g	SAD1223.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1223.0025	25 g	1860,00	
Fmoc-L-Thr(tBu)-Trt TG				SAL1224
Fmoc-L-Thr(tBu)-Trityl TentaGel S	SAL1224.0001	1 g	80,00	
LOADING 0.18-0.25 mmol/g	SAL1224.0005	5 g	290,00	
PARTICLE SIZE 90 µm	SAL1224.0025	25 g	1160,00	

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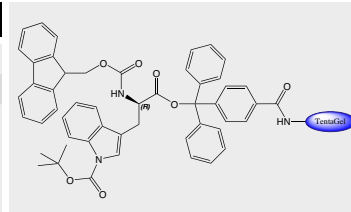
	Article No.	Quantity	Price
Fmoc-D-Thr(tBu)-Trt TG			SAD1224
Fmoc-D-Thr(tBu)-Trityl TentaGel S	SAD1224.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1224.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1224.0025	25 g	1860,00



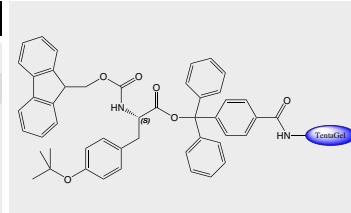
Fmoc-L-Trp(Boc)-Trt TG			SAL1228
Fmoc-L-Trp(Boc)-Trityl TentaGel S	SAL1228.0001	1 g	100,00
LOADING 0.18-0.25 mmol/g	SAL1228.0005	5 g	380,00
PARTICLE SIZE 90 µm	SAL1228.0025	25 g	1420,00



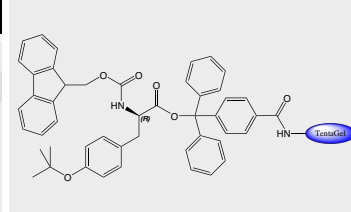
Fmoc-D-Trp(Boc)-Trt TG			SAD1228
Fmoc-D-Trp(Boc)-Trityl TentaGel S	SAD1228.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1228.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1228.0025	25 g	1860,00



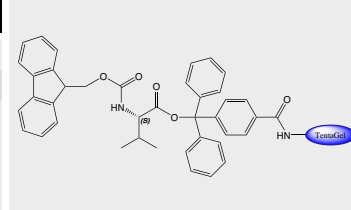
Fmoc-L-Tyr(tBu)-Trt TG			SAL1226
Fmoc-L-Tyr(tBu)-Trityl TentaGel S	SAL1226.0001	1 g	80,00
LOADING 0.18-0.25 mmol/g	SAL1226.0005	5 g	290,00
PARTICLE SIZE 90 µm	SAL1226.0025	25 g	1160,00



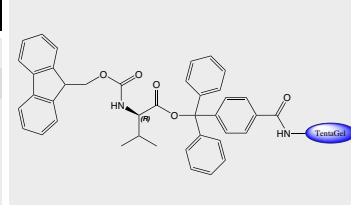
Fmoc-D-Tyr(tBu)-Trt TG			SAD1226
Fmoc-D-Tyr(tBu)-Trityl TentaGel S	SAD1226.0001	1 g	110,00
LOADING 0.18-0.25 mmol/g	SAD1226.0005	5 g	470,00
PARTICLE SIZE 90 µm	SAD1226.0025	25 g	1860,00



Fmoc-L-Val-Trt TG			SAL1227
Fmoc-L-Val-Trityl TentaGel S	SAL1227.0001	1 g	70,00
LOADING 0.18-0.25 mmol/g	SAL1227.0005	5 g	250,00
PARTICLE SIZE 90 µm	SAL1227.0025	25 g	980,00



Fmoc-D-Val-Trt TG			SAD1227
Fmoc-D-Val-Trityl TentaGel S	SAD1227.0001	1 g	90,00
LOADING 0.18-0.25 mmol/g	SAD1227.0005	5 g	370,00
PARTICLE SIZE 90 µm	SAD1227.0025	25 g	1460,00



9.2.4. Preloaded AC-TentaGel® Resins for the Synthesis of Protected Peptides

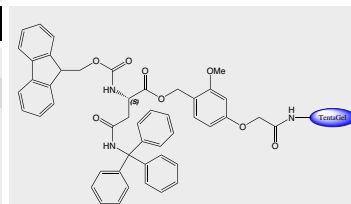
TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 3000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.

Peptides and other esters can be cleaved with 1-5% TFA in DCM. This property makes it very useful for the synthesis of protected peptide fragments and a high number of other applications.

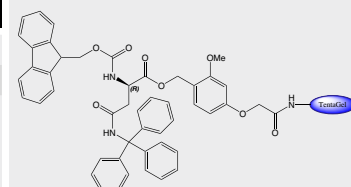
	Article No.	Quantity	Price	
Fmoc-L-Ala-AC TG				SAL1101
Fmoc-L-Ala-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1101.0001	1 g	70,00	
LOADING	0.2-0.25 mmol/g	5 g	280,00	
PARTICLE SIZE	90 µm	25 g	1100,00	
Fmoc-D-Ala-AC TG				SAD1101
Fmoc-D-Ala-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1101.0001	1 g	90,00	
LOADING	0.2-0.25 mmol/g	5 g	370,00	
PARTICLE SIZE	90 µm	25 g	1460,00	
Fmoc-L-Arg(Pbf)-AC TG				SAL1102
Fmoc-L-Arg(Pbf)-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1102.0001	1 g	110,00	
LOADING	0.15-0.25 mmol/g	5 g	420,00	
PARTICLE SIZE	90 µm	25 g	1670,00	
Fmoc-D-Arg(Pbf)-AC TG				SAD1102
Fmoc-D-Arg(Pbf)-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1102.0001	1 g	120,00	
LOADING	0.15-0.25 mmol/g	5 g	470,00	
PARTICLE SIZE	90 µm	25 g	1860,00	
Fmoc-L-Arg(Pmc)-AC TG				SAL1103
Fmoc-L-Arg(Pmc)-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1103.0001	1 g	120,00	
LOADING	0.15-0.25 mmol/g	5 g	470,00	
PARTICLE SIZE	90 µm	25 g	1860,00	
Fmoc-D-Arg(Pmc)-AC TG				SAD1103
Fmoc-D-Arg(Pmc)-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1103.0001	1 g	120,00	
LOADING	0.15-0.25 mmol/g	5 g	470,00	
PARTICLE SIZE	90 µm	25 g	1860,00	

Prices are in EUR, net, exw Germany

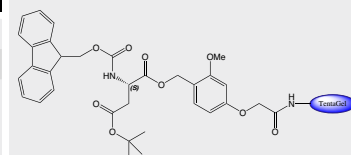
	Article No.	Quantity	Price
Fmoc-L-Asn(Trt)-AC TG			SAL1104
Fmoc-L-Asn(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAL1104.0001	1 g	90,00
	SAL1104.0005	5 g	330,00
LOADING 0.2-0.25 mmol/g	SAL1104.0025	25 g	1320,00
PARTICLE SIZE 90 µm			



	Article No.	Quantity	Price
Fmoc-D-Asn(Trt)-AC TG			SAD1104
Fmoc-D-Asn(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAD1104.0001	1 g	110,00
	SAD1104.0005	5 g	470,00
LOADING 0.2-0.25 mmol/g	SAD1104.0025	25 g	1860,00
PARTICLE SIZE 90 µm			

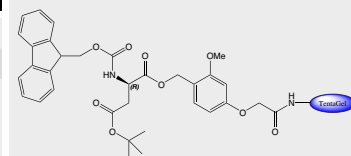


	Article No.	Quantity	Price
Fmoc-L-Asp(tBu)-AC TG			SAL1105
Fmoc-L-Asp(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAL1105.0001	1 g	90,00
	SAL1105.0005	5 g	330,00
LOADING 0.2-0.25 mmol/g	SAL1105.0025	25 g	1320,00
PARTICLE SIZE 90 µm			



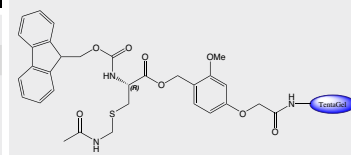
SYNONYMS Fmoc-L-Asp(OtBu)-AC TentaGel, Fmoc-Asp(OtBu)-AC TentaGel

	Article No.	Quantity	Price
Fmoc-D-Asp(tBu)-AC TG			SAD1105
Fmoc-D-Asp(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAD1105.0001	1 g	110,00
	SAD1105.0005	5 g	470,00
LOADING 0.2-0.25 mmol/g	SAD1105.0025	25 g	1860,00
PARTICLE SIZE 90 µm			

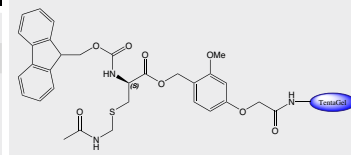


SYNONYMS Fmoc-D-Asp(OtBu)-AC TentaGel

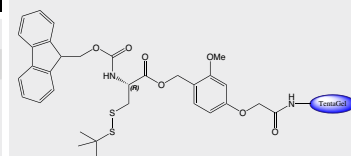
	Article No.	Quantity	Price
Fmoc-L-Cys(Acm)-AC TG			SAL1107
Fmoc-L-Cys(S-Acm)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAL1107.0001	1 g	90,00
	SAL1107.0005	5 g	330,00
LOADING 0.2-0.25 mmol/g	SAL1107.0025	25 g	1320,00
PARTICLE SIZE 90 µm			

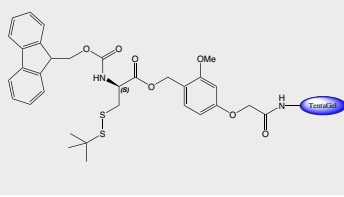
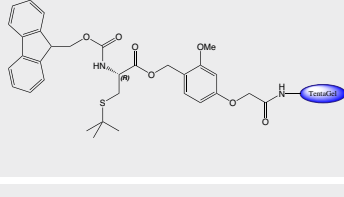
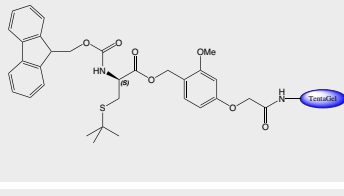
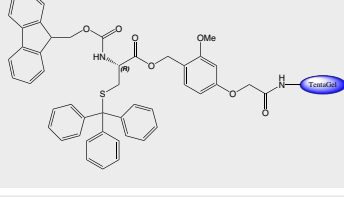
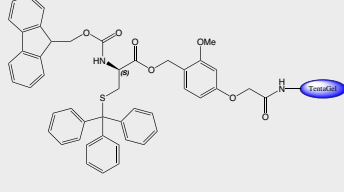
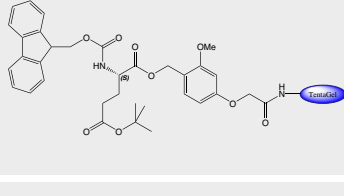
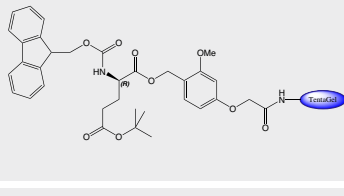


	Article No.	Quantity	Price
Fmoc-D-Cys(Acm)-AC TG			SAD1107
Fmoc-D-Cys(S-Acm)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAD1107.0001	1 g	110,00
	SAD1107.0005	5 g	470,00
LOADING 0.2-0.25 mmol/g	SAD1107.0025	25 g	1860,00
PARTICLE SIZE 90 µm			



	Article No.	Quantity	Price
Fmoc-L-Cys(SS-tBu)-AC TG			SAL1109
Fmoc-L-Cys(S-S-tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid] TentaGel S	SAL1109.0001	1 g	100,00
	SAL1109.0005	5 g	380,00
LOADING 0.2-0.25 mmol/g	SAL1109.0025	25 g	1580,00
PARTICLE SIZE 90 µm			



	Article No.	Quantity	Price	
Fmoc-D-Cys(SS-tBu)-AC TG				SAD1109
Fmoc-D-Cys(S-S-tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1109.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1109.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1109.0025	25 g	1860,00	
Fmoc-L-Cys(S-tBu)-AC TG				SAL1108
Fmoc-L-Cys(S-tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1108.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAL1108.0005	5 g	330,00	
PARTICLE SIZE 90 µm	SAL1108.0025	25 g	1320,00	
Fmoc-D-Cys(S-tBu)-AC TG				SAD1108
Fmoc-D-Cys(S-tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1108.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1108.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1108.0025	25 g	1860,00	
Fmoc-L-Cys(Trt)-AC TG				SAL1106
Fmoc-L-Cys(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1106.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAL1106.0005	5 g	330,00	
PARTICLE SIZE 90 µm	SAL1106.0025	25 g	1320,00	
Fmoc-D-Cys(Trt)-AC TG				SAD1106
Fmoc-D-Cys(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1106.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1106.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1106.0025	25 g	1860,00	
Fmoc-L-Glu(tBu)-AC TG				SAL1112
Fmoc-L-Glu(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1112.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAL1112.0005	5 g	330,00	
PARTICLE SIZE 90 µm	SAL1112.0025	25 g	1320,00	
SYNONYMS	Fmoc-L-Glu(OtBu)-AC TentaGel, Fmoc-Glu(OtBu)-AC TentaGel			
Fmoc-D-Glu(tBu)-AC TG				SAD1112
Fmoc-D-Glu(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1112.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1112.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1112.0025	25 g	1860,00	
SYNONYMS	Fmoc-D-Glu(OtBu)-AC TentaGel			

Prices are in EUR, net, exw Germany

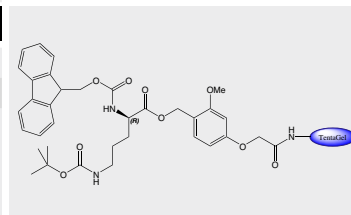


	Article No.	Quantity	Price	
Fmoc-L-Gln(Trt)-AC TG			SAL1110	
Fmoc-L-Gln(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAL1110.0001	1 g	90,00	
TentaGel S	SAL1110.0005	5 g	330,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAL1110.0025	25 g	1320,00	
Fmoc-D-Gln(Trt)-AC TG			SAD1110	
Fmoc-D-Gln(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAD1110.0001	1 g	110,00	
TentaGel S	SAD1110.0005	5 g	470,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAD1110.0025	25 g	1860,00	
Fmoc-Gly-AC TG			SAL1113	
Fmoc-Gly-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAL1113.0001	1 g	70,00	
TentaGel S	SAL1113.0005	5 g	280,00	
LOADING 0.2-0.22 mmol/g PARTICLE SIZE 90 µm	SAL1113.0025	25 g	1100,00	
Fmoc-L-His(Trt)-AC TG			SAL1114	
Fmoc-L-His(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAL1114.0001	1 g	90,00	
TentaGel S	SAL1114.0005	5 g	330,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAL1114.0025	25 g	1320,00	
Fmoc-D-His(Trt)-AC TG			SAD1114	
Fmoc-D-His(Trt)-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAD1114.0001	1 g	110,00	
TentaGel S	SAD1114.0005	5 g	470,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAD1114.0025	25 g	1860,00	
Fmoc-L-Ile-AC TG			SAL1115	
Fmoc-L-Ile-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAL1115.0001	1 g	70,00	
TentaGel S	SAL1115.0005	5 g	280,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAL1115.0025	25 g	1100,00	
Fmoc-D-Ile-AC TG			SAD1115	
Fmoc-D-Ile-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAD1115.0001	1 g	210,00	
TentaGel S	SAD1115.0005	5 g	800,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAD1115.0025	25 g	3170,00	
Fmoc-L-Leu-AC TG			SAL1116	
Fmoc-L-Leu-[3-methoxy-4-hydroxymethyl)phenoxyacetylamid]	SAL1116.0001	1 g	70,00	
TentaGel S	SAL1116.0005	5 g	280,00	
LOADING 0.2-0.25 mmol/g PARTICLE SIZE 90 µm	SAL1116.0025	25 g	1100,00	

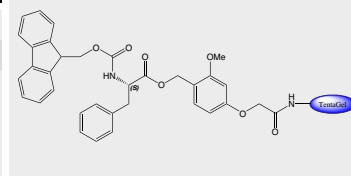
	Article No.	Quantity	Price	
Fmoc-D-Leu-AC TG				SAD1116
Fmoc-D-Leu-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1116.0001	1 g	90,00	
LOADING	SAD1116.0005	5 g	370,00	
PARTICLE SIZE	SAD1116.0025	25 g	1460,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-L-Lys(Boc)-AC TG				SAL1117
Fmoc-L-Lys(Boc)-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1117.0001	1 g	90,00	
LOADING	SAL1117.0005	5 g	330,00	
PARTICLE SIZE	SAL1117.0025	25 g	1320,00	
LOADING	0.2-0.22 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-D-Lys(Boc)-AC TG				SAD1117
Fmoc-D-Lys(Boc)-[3-methoxy-4-hydroxymethyl]phenoxyacetyl- amid] TentaGel S	SAD1117.0001	1 g	110,00	
LOADING	SAD1117.0005	5 g	470,00	
PARTICLE SIZE	SAD1117.0025	25 g	1860,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-L-Met-AC TG				SAL1118
Fmoc-L-Met-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1118.0001	1 g	70,00	
LOADING	SAL1118.0005	5 g	280,00	
PARTICLE SIZE	SAL1118.0025	25 g	1100,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-D-Met-AC TG				SAD1118
Fmoc-D-Met-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1118.0001	1 g	90,00	
LOADING	SAD1118.0005	5 g	370,00	
PARTICLE SIZE	SAD1118.0025	25 g	1460,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-L-Nle-AC TG				SAL1119
Fmoc-L-Nle-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAL1119.0001	1 g	90,00	
LOADING	SAL1119.0005	5 g	330,00	
PARTICLE SIZE	SAL1119.0025	25 g	1320,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-D-Nle-AC TG				SAD1119
Fmoc-D-Nle-[3-methoxy-4-hydroxymethyl]phenoxyacetylamid] TentaGel S	SAD1119.0001	1 g	110,00	
LOADING	SAD1119.0005	5 g	470,00	
PARTICLE SIZE	SAD1119.0025	25 g	1860,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			
Fmoc-L-Orn(Boc)-AC TG				SAL1120
Fmoc-L-Orn(Boc)-[3-methoxy-4-hydroxymethyl]phenoxyacetyl- amid] TentaGel S	SAL1120.0001	1 g	120,00	
LOADING	SAL1120.0005	5 g	470,00	
PARTICLE SIZE	SAL1120.0025	25 g	1650,00	
LOADING	0.2-0.25 mmol/g			
PARTICLE SIZE	90 µm			

Prices are in EUR, net, exw Germany

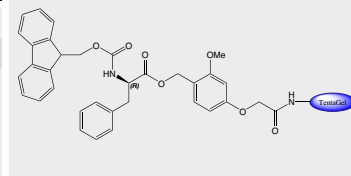
	Article No.	Quantity	Price
Fmoc-D-Orn(Boc)-AC TG SAD1120			
Fmoc-D-Orn(Boc)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1120.0001	1 g	140,00
	SAD1120.0005	5 g	560,00
LOADING 0.2-0.25 mmol/g	SAD1120.0025	25 g	2220,00
PARTICLE SIZE 90 µm			



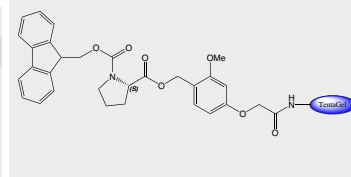
Fmoc-L-Phe-AC TG SAL1121			
Fmoc-L-Phe-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1121.0001	1 g	70,00
	SAL1121.0005	5 g	280,00
LOADING 0.2-0.25 mmol/g	SAL1121.0025	25 g	1100,00
PARTICLE SIZE 90 µm			



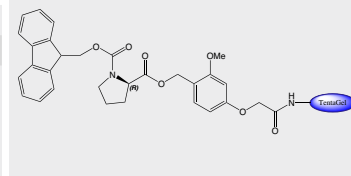
Fmoc-D-Phe-AC TG SAD1121			
Fmoc-D-Phe-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1121.0001	1 g	90,00
	SAD1121.0005	5 g	370,00
LOADING 0.2-0.25 mmol/g	SAD1121.0025	25 g	1460,00
PARTICLE SIZE 90 µm			



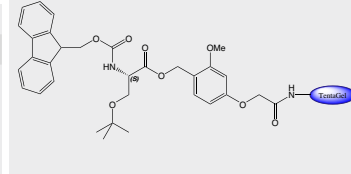
Fmoc-L-Pro-AC TG SAL1122			
Fmoc-L-Pro-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1122.0001	1 g	70,00
	SAL1122.0005	5 g	280,00
LOADING 0.2-0.25 mmol/g	SAL1122.0025	25 g	1100,00
PARTICLE SIZE 90 µm			



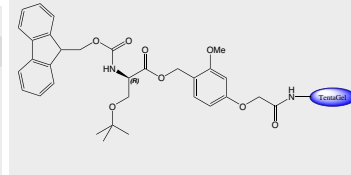
Fmoc-D-Pro-AC TG SAD1122			
Fmoc-D-Pro-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1122.0001	1 g	90,00
	SAD1122.0005	5 g	370,00
LOADING 0.2-0.25 mmol/g	SAD1122.0025	25 g	1460,00
PARTICLE SIZE 90 µm			



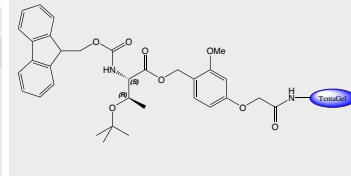
Fmoc-L-Ser(tBu)-AC TG SAL1123			
Fmoc-L-Ser(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1123.0001	1 g	90,00
	SAL1123.0005	5 g	330,00
LOADING 0.2-0.25 mmol/g	SAL1123.0025	25 g	1320,00
PARTICLE SIZE 90 µm			

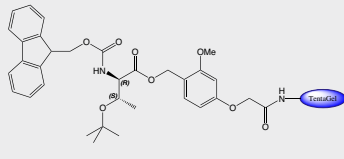
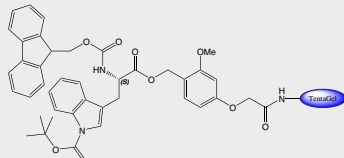
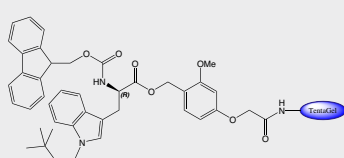
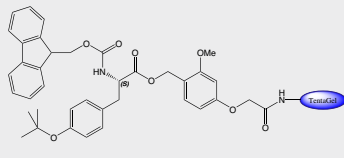
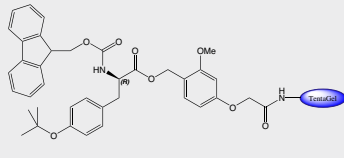
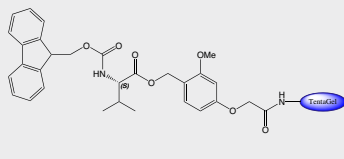
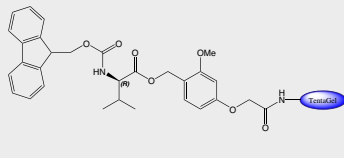


Fmoc-D-Ser(tBu)-AC TG SAD1123			
Fmoc-D-Ser(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1123.0001	1 g	110,00
	SAD1123.0005	5 g	470,00
LOADING 0.2-0.25 mmol/g	SAD1123.0025	25 g	1860,00
PARTICLE SIZE 90 µm			



Fmoc-L-Thr(tBu)-AC TG SAL1124			
Fmoc-L-Thr(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1124.0001	1 g	90,00
	SAL1124.0005	5 g	330,00
LOADING 0.2-0.25 mmol/g	SAL1124.0025	25 g	1320,00
PARTICLE SIZE 90 µm			

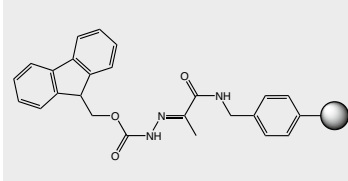
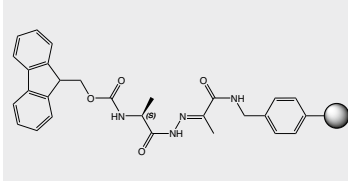
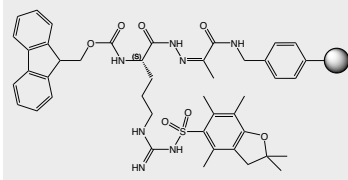
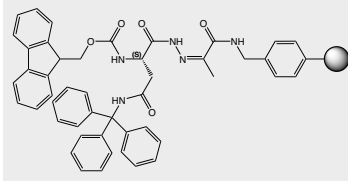
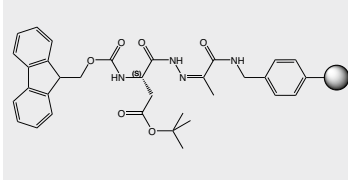
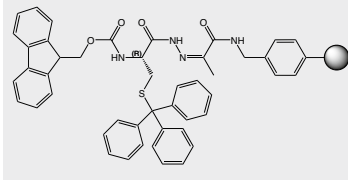


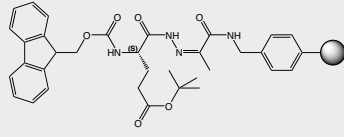
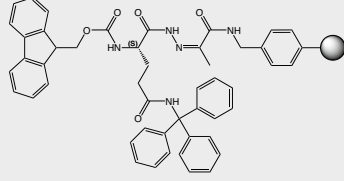
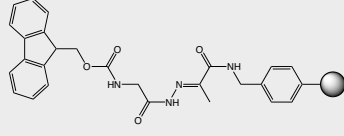
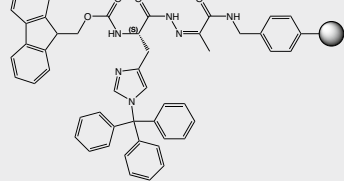
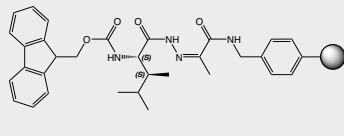
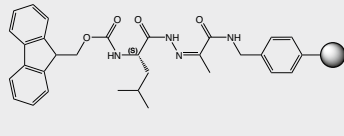
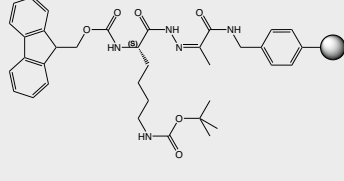
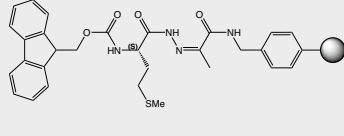
	Article No.	Quantity	Price	
Fmoc-D-Thr(tBu)-AC TG				SAD1124
Fmoc-D-Thr(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1124.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1124.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1124.0025	25 g	1860,00	
Fmoc-L-Trp(Boc)-AC TG				SAL1128
Fmoc-L-Trp(Boc)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1128.0001	1 g	100,00	
LOADING 0.2-0.25 mmol/g	SAL1128.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1128.0025	25 g	1420,00	
Fmoc-D-Trp(Boc)-AC TG				SAD1128
Fmoc-D-Trp(Boc)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1128.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1128.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1128.0025	25 g	1860,00	
Fmoc-L-Tyr(tBu)-AC TG				SAL1126
Fmoc-L-Tyr(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1126.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAL1126.0005	5 g	330,00	
PARTICLE SIZE 90 µm	SAL1126.0025	25 g	1320,00	
Fmoc-D-Tyr(tBu)-AC TG				SAD1126
Fmoc-D-Tyr(tBu)-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1126.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1126.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1126.0025	25 g	1860,00	
Fmoc-L-Val-AC TG				SAL1127
Fmoc-L-Val-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAL1127.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1127.0005	5 g	280,00	
PARTICLE SIZE 90 µm	SAL1127.0025	25 g	1100,00	
Fmoc-D-Val-AC TG				SAD1127
Fmoc-D-Val-[3-methoxy-4-hydroxymethyl)phenoxyacetyl- amid] TentaGel S	SAD1127.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAD1127.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1127.0025	25 g	1460,00	

Prices are in EUR, net, exw Germany

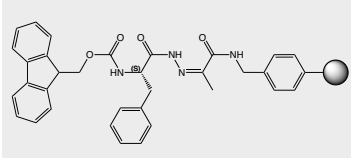
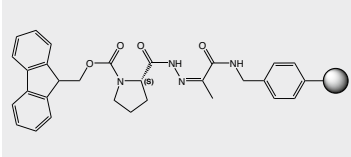
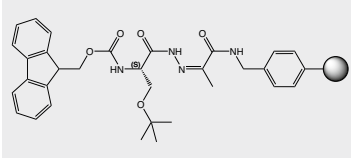
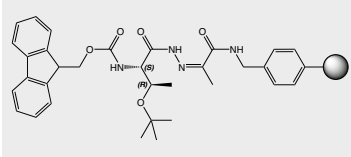
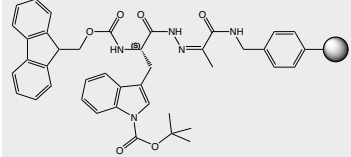
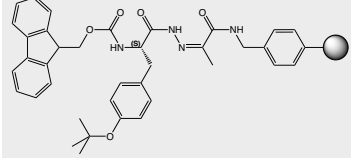
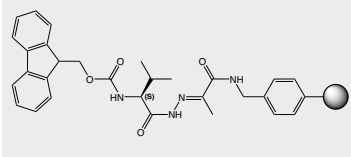
9.2.5. Hydrazone Resins for the Synthesis of Peptide Thio Esters and Native Chemical Ligation

This novel hydrazine resin, derived from pyruvic acid, provides a new and convenient method for the synthesis of peptide hydrazides, which can be applied during ligation technique. It was shown that the hydrazone linker is completely stable in the course of standard Fmoc SPPS. Moreover, it can tolerate a treatment with 5 % TFA/DCM thus permitting selective removal of Mtt or related acid-labile protecting groups. Subsequent application of cleavage cocktails containing neat TFA permits to obtain the desired peptides in good yields and premium purity [76].

	Article No.	Quantity	Price	
Fmoc-NHN=Pyv Resin				PYV1000
Fmoc-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1000.0001	1 g	125,00	
LOADING > 0.3 mmol/g	PYV1000.0005	5 g	375,00	
PARTICLE SIZE 100-200 mesh	PYV1000.0025	25 g	1250,00	
CROSSLINKING 1% DVB				
Fmoc-L-Ala-NHN=Pyv Resin				PYV1100
Fmoc-L-alanyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1100.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1100.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1100.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-Arg(Pbf)-NHN=Pyv Resin				PYV1110
Fmoc-N'-2,2,4,6,7-pentamethyl-dihydrobenzofuran-5-sulfonyl-L-arginyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1110.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1110.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1110.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Asn(Trt)-NHN=Pyv Resin				PYV1120
Fmoc-N-beta-trityl-L-asparaginyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1120.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1120.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1120.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Asp(tBu)-NHN=Pyv Resin				PYV1130
Fmoc-L-aspartyl-beta-t-butyl ester-alpha-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1130.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1130.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1130.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Cys(Trt)-NHN=Pyv Resin				PYV1140
Fmoc-S-trityl-L-cysteinyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1140.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1140.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1140.0025	25 g	1600,00	
CROSSLINKING 1% DVB				

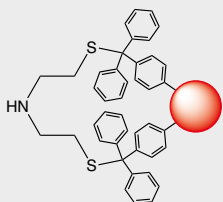
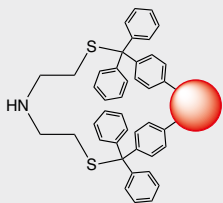
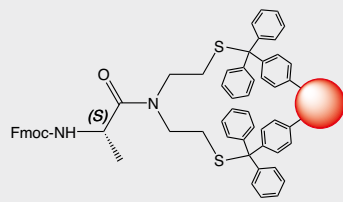
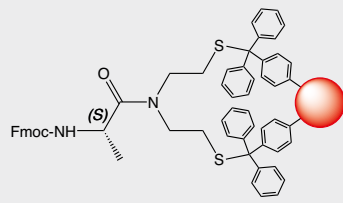
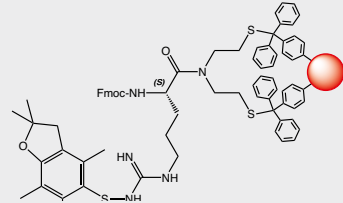
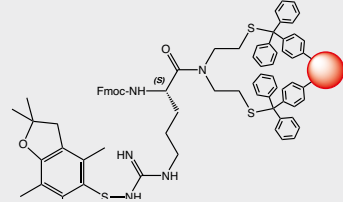
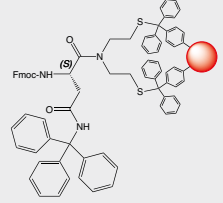
	Article No.	Quantity	Price	
Fmoc-L-Glu(tBu)-NHN=Pyv Resin				PYV1150
Fmoc-L-glutamyl-gamma-t-butyl ester-alpha-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1150.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1150.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1150.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Gln(Trt)-NHN=Pyv Resin				PYV1160
Fmoc-N-gamma-trityl-L-glutamyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1160.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1160.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1160.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-Gly-NHN=Pyv Resin				PYV1170
Fmoc-glycyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1170.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1170.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1170.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-His(Trt)-NHN=Pyv Resin				PYV1180
Fmoc-N-trityl-L-histidyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1180.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1180.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1180.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Ile-NHN=Pyv Resin				PYV1190
Fmoc-L-isoleucyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1190.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1190.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1190.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-Leu-NHN=Pyv Resin				PYV1200
Fmoc-L-leucyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1200.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1200.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1200.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-Lys(Boc)-NHN=Pyv Resin				PYV1210
Fmoc-N-epsilon-t-butyloxycarbonyl-L-lysyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1210.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1210.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1210.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Met-NHN=Pyv Resin				PYV1220
Fmoc-L-methionyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1220.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1220.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1220.0025	25 g	1450,00	
CROSSLINKING 1% DVB				

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	Article No.	Quantity	Price	
Fmoc-L-Phe-NHN=Pyv Resin				PYV1230
Fmoc-L-phenylalanyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1230.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1230.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1230.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-Pro-NHN=Pyv Resin				PYV1240
Fmoc-L-prolinyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1240.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1240.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1240.0025	25 g	1450,00	
CROSSLINKING 1% DVB				
Fmoc-L-Ser(tBu)-NHN=Pyv Resin				PYV1250
Fmoc-O-t-butyl-L-seryl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1250.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1250.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1250.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Thr(tBu)-NHN=Pyv Resin				PYV1260
Fmoc-O-t-butyl-L-threonyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1260.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1260.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1260.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Trp(Boc)-NHN=Pyv Resin				PYV1270
Fmoc-N-t-butyloxycarbonyl-L-tryptophyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1270.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1270.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1270.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Tyr(tBu)-NHN=Pyv Resin				PYV1280
Fmoc-O-t-butyl-L-tyrosyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1280.0001	1 g	175,00	
LOADING > 0.3 mmol/g	PYV1280.0005	5 g	475,00	
PARTICLE SIZE 100-200 mesh	PYV1280.0025	25 g	1600,00	
CROSSLINKING 1% DVB				
Fmoc-L-Val-NHN=Pyv Resin				PYV1290
Fmoc-L-valyl-hydrazono-pyruvyl-aminomethylpolystyrene resin	PYV1290.0001	1 g	150,00	
LOADING > 0.3 mmol/g	PYV1290.0005	5 g	425,00	
PARTICLE SIZE 100-200 mesh	PYV1290.0025	25 g	1250,00	
CROSSLINKING 1% DVB				

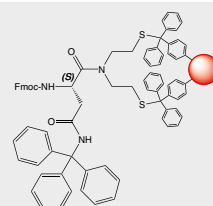
9.2.6. SEA Resins for the Synthesis of Peptide Thio Esters and Native Chemical Ligation

New resin for the synthesis of long peptides and mini-proteins. An elegant method of forming peptide thioesters as fragments for the synthesis of mini-proteins with natural peptide ligation techniques (NPL) [74; 75; 76; 77; 78]

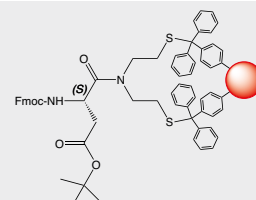
	Article No.	Quantity	Price	
SEA-PS resin			SEA1000	
bis(2-Sulfanylethyl)amino-trityl-polystyrene resin	SEA1000.0001	1 g	200,00	
LOADING 0.14-0.16 mmol/g	SEA1000.0005	5 g	540,00	
PARTICLE SIZE 100-200 mesh	SEA1000.0010	10 g	775,00	
CROSSLINKING 1% DVB	SEA1000.0025	25 g	1450,00	
SEA-PS resin			SEA2000	
bis(2-Sulfanylethyl)amino-trityl-polystyrene resin	SEA2000.0001	1 g	200,00	
LOADING 0.14-0.16 mmol/g	SEA2000.0005	5 g	540,00	
PARTICLE SIZE 200-400 mesh	SEA2000.0010	10 g	775,00	
CROSSLINKING 1% DVB	SEA2000.0025	25 g	1450,00	
Fmoc-L-Ala-SEA-PS resin			SEA1001	
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-alanine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1001.0001	1 g	350,00	
PARTICLE SIZE 100-200 mesh	SEA1001.0005	5 g	890,00	
CROSSLINKING 1% DVB	SEA1001.0010	10 g	1275,00	
	SEA1001.0025	25 g	2025,00	
Fmoc-L-Ala-SEA-PS resin			SEA2001	
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-alanine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2001.0001	1 g	350,00	
PARTICLE SIZE 200-400 mesh	SEA2001.0005	5 g	890,00	
CROSSLINKING 1% DVB	SEA2001.0010	10 g	1275,00	
	SEA2001.0025	25 g	2025,00	
Fmoc-L-Arg(Pbf)-SEA-PS resin			SEA1002	
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-arginine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1002.0001	1 g	450,00	
PARTICLE SIZE 100-200 mesh	SEA1002.0005	5 g	1125,00	
CROSSLINKING 1% DVB	SEA1002.0010	10 g	1675,00	
	SEA1002.0025	25 g	2950,00	
Fmoc-L-Arg(Pbf)-SEA-PS resin			SEA2002	
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N'-2,2,4,6,7-pentamethylidihydrobenzofuran-5-sulfonyl-L-arginine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2002.0001	1 g	450,00	
PARTICLE SIZE 200-400 mesh	SEA2002.0005	5 g	1125,00	
CROSSLINKING 1% DVB	SEA2002.0010	10 g	1675,00	
	SEA2002.0025	25 g	2950,00	
Fmoc-L-Asn(Trt)-SEA-PS resin			SEA1003	
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-beta-trityl-L-asparagine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1003.0001	1 g	400,00	
PARTICLE SIZE 100-200 mesh	SEA1003.0005	5 g	1000,00	
CROSSLINKING 1% DVB	SEA1003.0010	10 g	1390,00	
	SEA1003.0025	25 g	2175,00	

Prices are in EUR, net, exw Germany

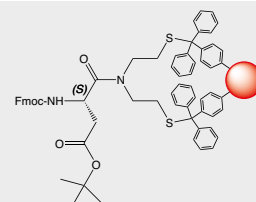
	Article No.	Quantity	Price
Fmoc-L-Asn(Trt)-SEA-PS resin SEA2003			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-beta-trityl-L-asparagine bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	SEA2003.0001	1 g	400,00
	SEA2003.0005	5 g	1000,00
	SEA2003.0010	10 g	1390,00
	SEA2003.0025	25 g	2175,00



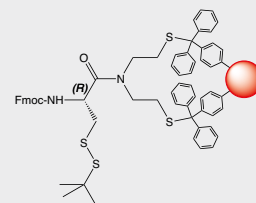
Fmoc-L-Asp(tBu)-SEA-PS resin SEA1004			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-aspartic acid beta-t-butyl ester bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SEA1004.0001	1 g	375,00
	SEA1004.0005	5 g	945,00
	SEA1004.0010	10 g	1350,00
	SEA1004.0025	25 g	2125,00



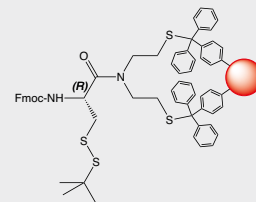
Fmoc-L-Asp(tBu)-SEA-PS resin SEA2004			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-aspartic acid beta-t-butyl ester bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	SEA2004.0001	1 g	375,00
	SEA2004.0005	5 g	945,00
	SEA2004.0010	10 g	1350,00
	SEA2004.0025	25 g	2125,00



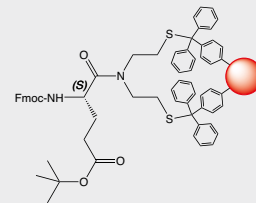
Fmoc-L-Cys(S-tBu)-SEA-PS resin SEA1005			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-S-(t-butylthio)-L-cysteine bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SEA1005.0001	1 g	540,00
	SEA1005.0005	5 g	1350,00
	SEA1005.0010	10 g	2000,00
	SEA1005.0025	25 g	3525,00



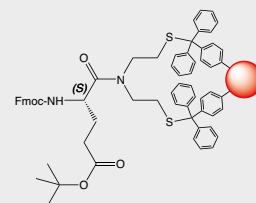
Fmoc-L-Cys(S-tBu)-SEA-PS resin SEA2005			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-S-(t-butylthio)-L-cysteine bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	SEA2005.0001	1 g	540,00
	SEA2005.0005	5 g	1350,00
	SEA2005.0010	10 g	2000,00
	SEA2005.0025	25 g	3525,00



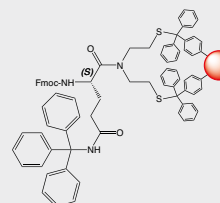
Fmoc-L-Glu(tBu)-SEA-PS resin SEA1007			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-glutamic-acid-gamma-t-butyl ester bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SEA1007.0001	1 g	400,00
	SEA1007.0005	5 g	1000,00
	SEA1007.0010	10 g	1390,00
	SEA1007.0025	25 g	2175,00



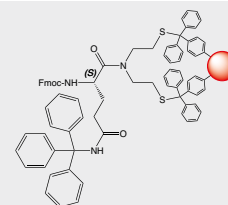
Fmoc-L-Glu(tBu)-SEA-PS resin SEA2007			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-glutamic-acid-gamma-t-butyl ester bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	SEA2007.0001	1 g	400,00
	SEA2007.0005	5 g	1000,00
	SEA2007.0010	10 g	1390,00
	SEA2007.0025	25 g	2175,00



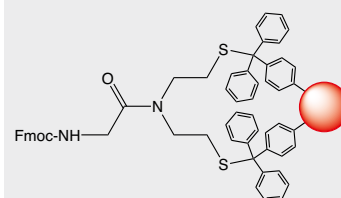
Fmoc-L-Gln(Trt)-SEA-PS resin SEA1006			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-gamma-trityl-L-glutamine bis(2-sulfanylethyl)amino-trityl-polystyrene PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SEA1006.0001	1 g	400,00
	SEA1006.0005	5 g	1000,00
	SEA1006.0010	10 g	1390,00
	SEA1006.0025	25 g	2175,00



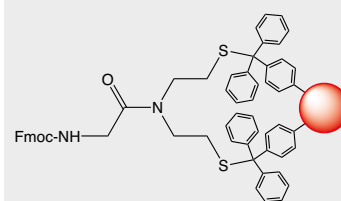
	Article No.	Quantity	Price
Fmoc-L-Gln(Trt)-SEA-PS resin			SEA2006
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-gamma-trityl-L-glutamine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2006.0001	1 g	400,00
PARTICLE SIZE 200-400 mesh	SEA2006.0005	5 g	1000,00
CROSSLINKING 1% DVB	SEA2006.0010	10 g	1390,00
	SEA2006.0025	25 g	2175,00



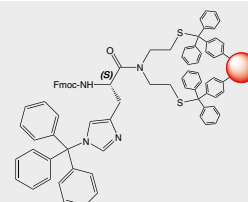
	Article No.	Quantity	Price
Fmoc-Gly-SEA-PS resin			SEA1008
N-alpha-(9-Fluorenylmethyloxycarbonyl)-glycine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1008.0001	1 g	350,00
PARTICLE SIZE 100-200 mesh	SEA1008.0005	5 g	890,00
CROSSLINKING 1% DVB	SEA1008.0010	10 g	1275,00
	SEA1008.0025	25 g	2025,00



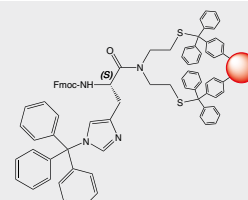
	Article No.	Quantity	Price
Fmoc-Gly-SEA-PS resin			SEA2008
N-alpha-(9-Fluorenylmethyloxycarbonyl)-glycine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2008.0001	1 g	350,00
PARTICLE SIZE 200-400 mesh	SEA2008.0005	5 g	890,00
CROSSLINKING 1% DVB	SEA2008.0010	10 g	1275,00
	SEA2008.0025	25 g	2025,00



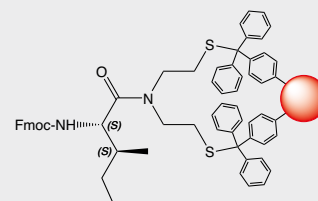
	Article No.	Quantity	Price
Fmoc-L-His(Trt)-SEA-PS resin			SEA1009
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-im-trityl-L-histidine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1009.0001	1 g	400,00
PARTICLE SIZE 100-200 mesh	SEA1009.0005	5 g	1000,00
CROSSLINKING 1% DVB	SEA1009.0010	10 g	1390,00
	SEA1009.0025	25 g	2175,00



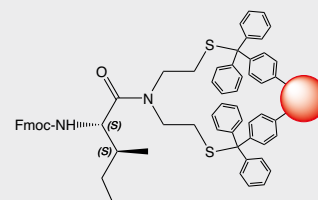
	Article No.	Quantity	Price
Fmoc-L-His(Trt)-SEA-PS resin			SEA2009
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-im-trityl-L-histidine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2009.0001	1 g	400,00
PARTICLE SIZE 200-400 mesh	SEA2009.0005	5 g	1000,00
CROSSLINKING 1% DVB	SEA2009.0010	10 g	1390,00
	SEA2009.0025	25 g	2175,00



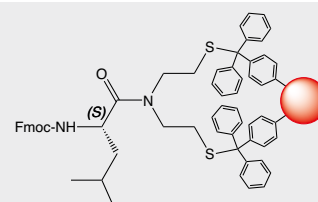
	Article No.	Quantity	Price
Fmoc-L-Ile-SEA-PS resin			SEA1010
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-isoleucine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1010.0001	1 g	350,00
PARTICLE SIZE 100-200 mesh	SEA1010.0005	5 g	890,00
CROSSLINKING 1% DVB	SEA1010.0010	10 g	1275,00
	SEA1010.0025	25 g	2025,00



	Article No.	Quantity	Price
Fmoc-L-Ile-SEA-PS resin			SEA2010
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-isoleucine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2010.0001	1 g	350,00
PARTICLE SIZE 200-400 mesh	SEA2010.0005	5 g	890,00
CROSSLINKING 1% DVB	SEA2010.0010	10 g	1275,00
	SEA2010.0025	25 g	2025,00

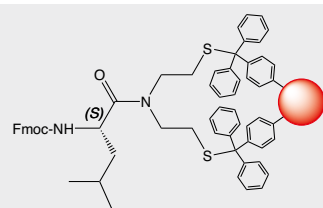


	Article No.	Quantity	Price
Fmoc-L-Leu-SEA-PS resin			SEA1011
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-leucine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1011.0001	1 g	350,00
PARTICLE SIZE 100-200 mesh	SEA1011.0005	5 g	890,00
CROSSLINKING 1% DVB	SEA1011.0010	10 g	1275,00
	SEA1011.0025	25 g	2025,00

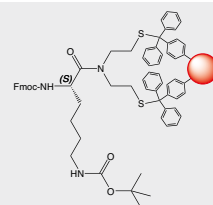


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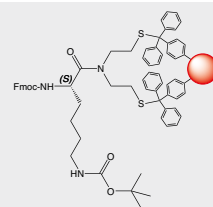
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Fmoc-L-Leu-SEA-PS resin SEA2011			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-leucine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2011.0001	1 g	350,00
	SEA2011.0005	5 g	890,00
PARTICLE SIZE 200-400 mesh	SEA2011.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA2011.0025	25 g	2025,00



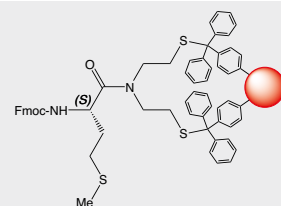
Fmoc-L-Lys(Boc)-SEA-PS resin SEA1012			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-t-butylloxycarbonyl-L-lysine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1012.0001	1 g	375,00
	SEA1012.0005	5 g	945,00
PARTICLE SIZE 100-200 mesh	SEA1012.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA1012.0025	25 g	2125,00



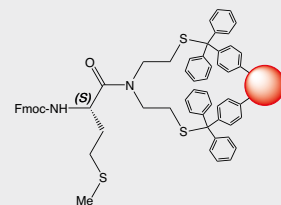
Fmoc-L-Lys(Boc)-SEA-PS resin SEA2012			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-epsilon-t-butylloxycarbonyl-L-lysine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2012.0001	1 g	375,00
	SEA2012.0005	5 g	945,00
PARTICLE SIZE 200-400 mesh	SEA2012.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA2012.0025	25 g	2125,00



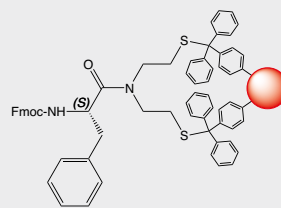
Fmoc-L-Met-SEA-PS resin SEA1013			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-methionine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1013.0001	1 g	350,00
	SEA1013.0005	5 g	890,00
PARTICLE SIZE 100-200 mesh	SEA1013.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA1013.0025	25 g	2025,00



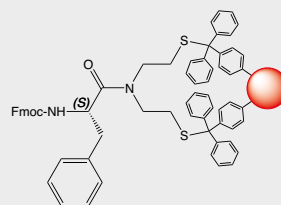
Fmoc-L-Met-SEA-PS resin SEA2013			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-methionine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2013.0001	1 g	350,00
	SEA2013.0005	5 g	890,00
PARTICLE SIZE 200-400 mesh	SEA2013.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA2013.0025	25 g	2025,00



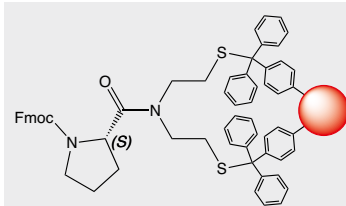
Fmoc-L-Phe-SEA-PS resin SEA1014			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-phenylalanine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1014.0001	1 g	350,00
	SEA1014.0005	5 g	890,00
PARTICLE SIZE 100-200 mesh	SEA1014.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA1014.0025	25 g	2025,00



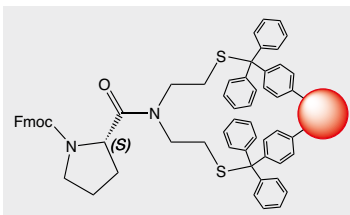
Fmoc-L-Phe-SEA-PS resin SEA2014			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-phenylalanine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2014.0001	1 g	350,00
	SEA2014.0005	5 g	890,00
PARTICLE SIZE 200-400 mesh	SEA2014.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA2014.0025	25 g	2025,00



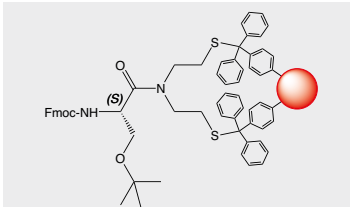
Fmoc-L-Pro-SEA-PS resin SEA1015			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-proline bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1015.0001	1 g	350,00
	SEA1015.0005	5 g	890,00
PARTICLE SIZE 100-200 mesh	SEA1015.0010	10 g	1390,00
CROSSLINKING 1% DVB	SEA1015.0025	25 g	2025,00



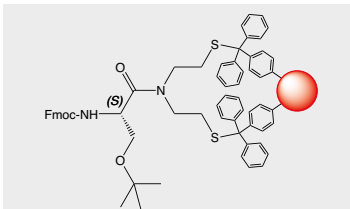
	Article No.	Quantity	Price
Fmoc-L-Pro-SEA-PS resin SEA2015			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-L-proline bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2015.0001	1 g	350,00
	SEA2015.0005	5 g	890,00
PARTICLE SIZE 200-400 mesh	SEA2015.0010	10 g	1275,00
CROSSLINKING 1% DVB	SEA2015.0025	25 g	2025,00



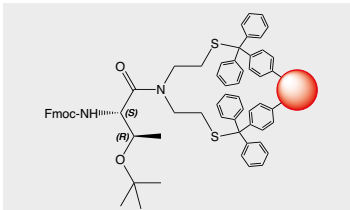
Fmoc-L-Ser(tBu)-SEA-PS resin SEA1016			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-O-t-butyl-L-serine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1016.0001	1 g	375,00
	SEA1016.0005	5 g	945,00
PARTICLE SIZE 100-200 mesh	SEA1016.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA1016.0025	25 g	2125,00



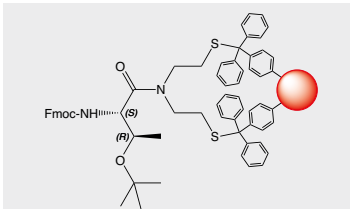
Fmoc-L-Ser(tBu)-SEA-PS resin SEA2016			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-O-t-butyl-L-serine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2016.0001	1 g	375,00
	SEA2016.0005	5 g	945,00
PARTICLE SIZE 200-400 mesh	SEA2016.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA2016.0025	25 g	2125,00



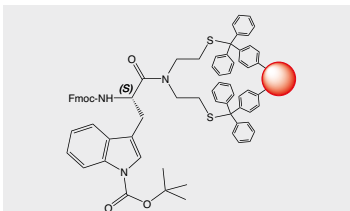
Fmoc-L-Thr(tBu)-SEA-PS resin SEA1017			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-O-t-butyl-L-threonine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1017.0001	1 g	375,00
	SEA1017.0005	5 g	945,00
PARTICLE SIZE 100-200 mesh	SEA1017.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA1017.0025	25 g	2125,00



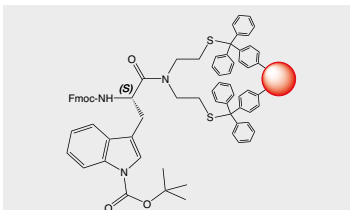
Fmoc-L-Thr(tBu)-SEA-PS resin SEA2017			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-O-t-butyl-L-threonine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2017.0001	1 g	375,00
	SEA2017.0005	5 g	945,00
PARTICLE SIZE 200-400 mesh	SEA2017.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA2017.0025	25 g	2125,00



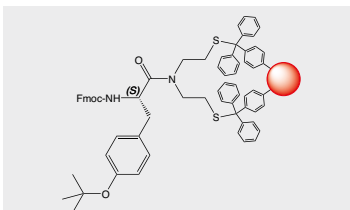
Fmoc-L-Trp(Boc)-SEA-PS resin SEA1018			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-in-t-butylloxycarbonyl-L-tryptophan bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1018.0001	1 g	425,00
	SEA1018.0005	5 g	1050,00
PARTICLE SIZE 100-200 mesh	SEA1018.0010	10 g	1500,00
CROSSLINKING 1% DVB	SEA1018.0025	25 g	2500,00



Fmoc-L-Trp(Boc)-SEA-PS resin SEA2018			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-N-in-t-butylloxycarbonyl-L-tryptophan bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA2018.0001	1 g	425,00
	SEA2018.0005	5 g	1050,00
PARTICLE SIZE 200-400 mesh	SEA2018.0010	10 g	1500,00
CROSSLINKING 1% DVB	SEA2018.0025	25 g	2500,00

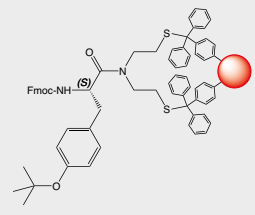


Fmoc-L-Tyr(tBu)-SEA-PS resin SEA1019			
N-alpha-(9-Fluorenylmethyloxycarbonyl)-O-t-butyl-L-tyrosine bis(2-sulfanylethyl)amino-trityl-polystyrene	SEA1019.0001	1 g	375,00
	SEA1019.0005	5 g	945,00
PARTICLE SIZE 100-200 mesh	SEA1019.0010	10 g	1350,00
CROSSLINKING 1% DVB	SEA1019.0025	25 g	2125,00

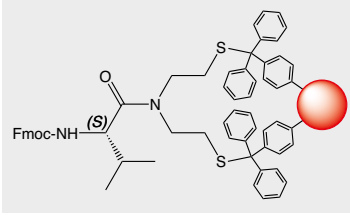


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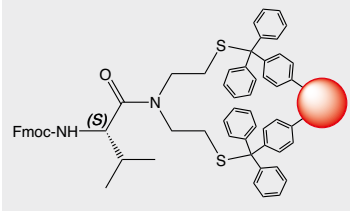
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Fmoc-L-Tyr(tBu)-SEA-PS resin			SEA2019
N-alpha-(9-Fluorenylmethoxycarbonyl)-O-t-butyl-L-tyrosine bis(2-sulfanylethyl)amino-trityl-polystyrene			
PARTICLE SIZE	200-400 mesh	SEA2019.0001	1 g 375,00
CROSSLINKING	1% DVB	SEA2019.0005	5 g 945,00
		SEA2019.0010	10 g 1350,00
		SEA2019.0025	25 g 2125,00



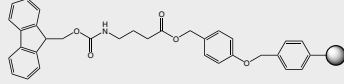
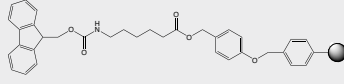
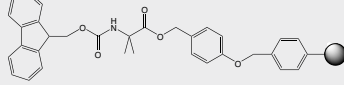
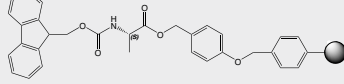
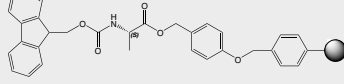
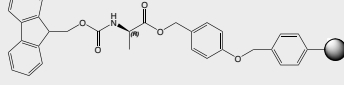
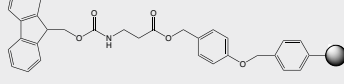
Fmoc-L-Val-SEA-PS resin			SEA1020
N-alpha-(9-Fluorenylmethoxycarbonyl)-L-valine bis(2-sulfanylethyl)amino-trityl-polystyrene			
PARTICLE SIZE	100-200 mesh	SEA1020.0001	1 g 350,00
CROSSLINKING	1% DVB	SEA1020.0005	5 g 890,00
		SEA1020.0010	10 g 1275,00
		SEA1020.0025	25 g 2025,00



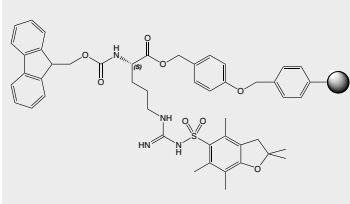
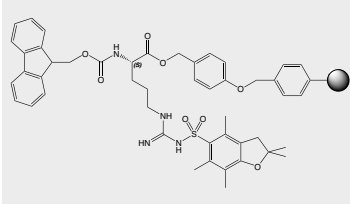
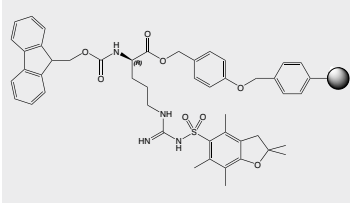
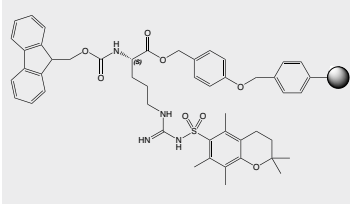
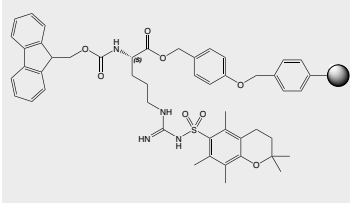
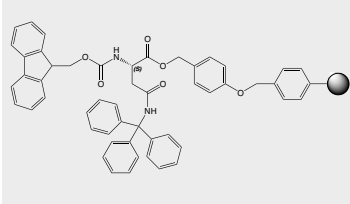
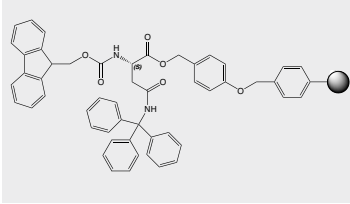
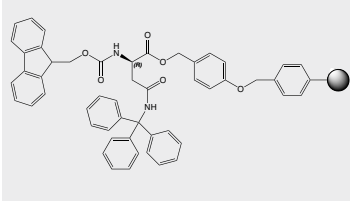
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N-alpha-(9-Fluorenylmethoxycarbonyl)-L-valine bis(2-sulfanylethyl)amino-trityl-polystyrene			
PARTICLE SIZE	200-400 mesh	SEA2020.0001	1 g 350,00
CROSSLINKING	1% DVB	SEA2020.0005	5 g 890,00
		SEA2020.0010	10 g 1275,00
		SEA2020.0025	25 g 2025,00

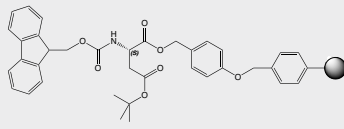
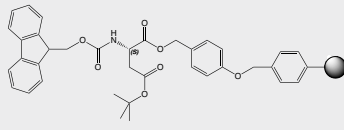
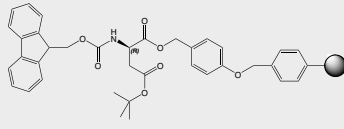
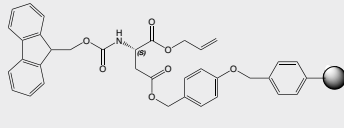
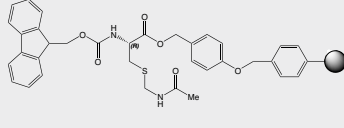
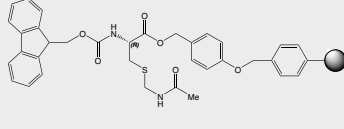
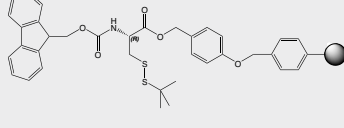


9.2.7. Preloaded Wang Resins

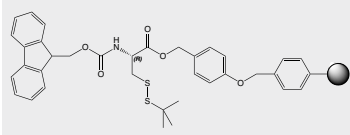
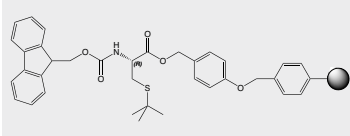
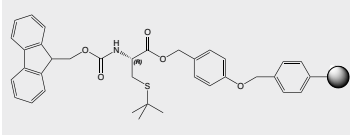
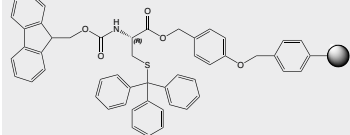
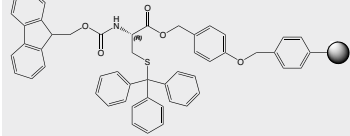
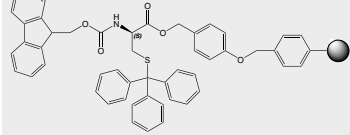
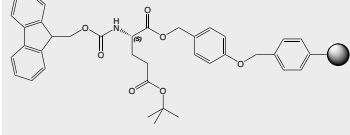
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Fmoc-4-Abu-Wang Resin		WAA2630		
Fmoc-4-Aminobutyric acid-Wang Resin	WAA2630.0000	please inquire		
PARTICLE SIZE	100-200 mesh			
CROSSLINKING	1% DVB			
Fmoc-Ahx Wang Resin		WAA5129		
Fmoc-6-Aminohexanoic acid-Wang Resin	WAA5129.0001	1 g	60,00	
PARTICLE SIZE	100-200 mesh	WAA5129.0005	5 g	175,00
CROSSLINKING	1% DVB			
Fmoc-Aib-Wang Resin		WAA5139		
Fmoc-Aminoisobutyric acid-Wang Resin	WAA5139.0001	1 g	65,00	
PARTICLE SIZE	100-200 mesh	WAA5139.0005	5 g	200,00
CROSSLINKING	1% DVB			
Fmoc-L-Ala-Wang Resin		WAA11301		
Fmoc-L-Alanine-Wang Resin	WAA11301.0001	1 g	30,00	
PARTICLE SIZE	100-200 mesh	WAA11301.0005	5 g	100,00
CROSSLINKING	1% DVB	WAA11301.0025	25 g	380,00
Fmoc-L-Ala-Wang Resin		WAA41301		
Fmoc-L-Alanine-Wang Resin	WAA41301.0005	5 g	100,00	
PARTICLE SIZE	200-400 mesh	WAA41301.0025	25 g	380,00
CROSSLINKING	1% DVB			
Fmoc-D-Ala-Wang Resin		RAA2001		
Fmoc-D-Alanine-Wang Resin	RAA2001.0001	1 g	65,00	
PARTICLE SIZE	100-200 mesh	RAA2001.0005	5 g	200,00
CROSSLINKING	1% DVB			
Fmoc-beta-Ala-Wang Resin		WAA5101		
Fmoc-beta-Alanine-Wang Resin	WAA5101.0005	5 g	140,00	
PARTICLE SIZE	100-200 mesh	WAA5101.0025	25 g	550,00
CROSSLINKING	1% DVB			

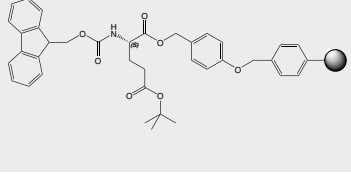
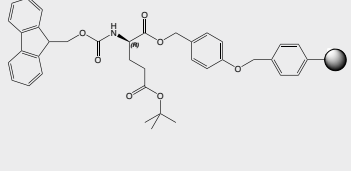
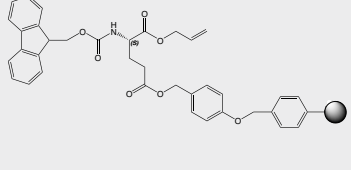
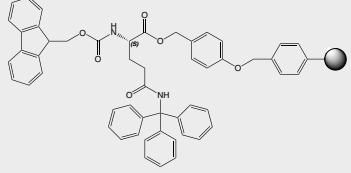
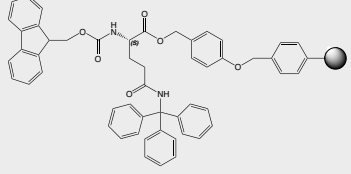
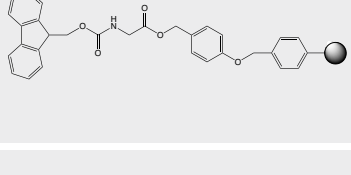
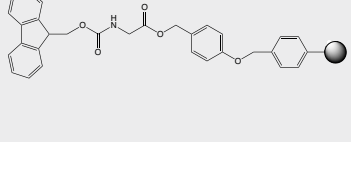
Prices are in EUR, net, exw Germany

		Article No.	Quantity	Price	
Fmoc-L-Arg(Pbf)-Wang Resin		WAA11302			
PARTICLE SIZE	100-200 mesh	WAA11302.0001	1 g	90,00	
CROSSLINKING	1% DVB	WAA11302.0005	5 g	350,00	
		WAA11302.0025	25 g	1400,00	
Fmoc-L-Arg(Pbf)-Wang Resin		WAA41302			
PARTICLE SIZE	200-400 mesh	WAA41302.0001	1 g	90,00	
CROSSLINKING	1% DVB	WAA41302.0005	5 g	350,00	
		WAA41302.0025	25 g	1400,00	
Fmoc-D-Arg(Pbf)-Wang Resin		WAA6109			
PARTICLE SIZE	100-200 mesh	WAA6109.0001	1 g	125,00	
CROSSLINKING	1% DVB	WAA6109.0005	5 g	500,00	
Fmoc-L-Arg(Pmc)-Wang resin		WAA11303			
PARTICLE SIZE	100-200 mesh	WAA11303.0001	1 g	90,00	
CROSSLINKING	1% DVB	WAA11303.0005	5 g	350,00	
		WAA11303.0025	25 g	1400,00	
Fmoc-L-Arg(Pmc)-Wang Resin		WAA41303			
PARTICLE SIZE	200-400 mesh	WAA41303.0001	1 g	90,00	
CROSSLINKING	1% DVB	WAA41303.0005	5 g	350,00	
		WAA41303.0025	25 g	1400,00	
Fmoc-L-Asn(Trt)-Wang Resin		WAA11304			
PARTICLE SIZE	100-200 mesh	WAA11304.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA11304.0005	5 g	290,00	
		WAA11304.0025	25 g	1140,00	
Fmoc-L-Asn(Trt)-Wang Resin		WAA41304			
PARTICLE SIZE	200-400 mesh	WAA41304.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA41304.0005	5 g	290,00	
		WAA41304.0025	25 g	1140,00	
Fmoc-D-Asn(Trt)-Wang Resin		WAA6108			
PARTICLE SIZE	100-200 mesh	WAA6108.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6108.0005	5 g	450,00	

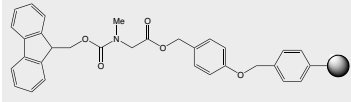
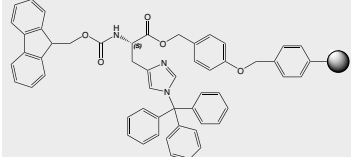
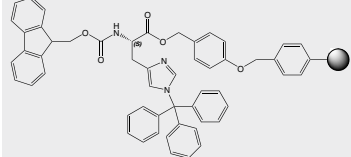
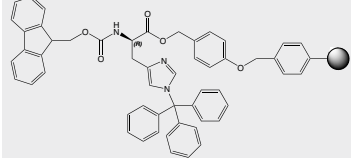
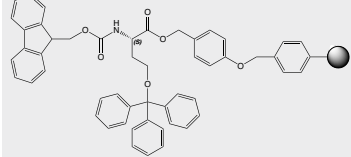
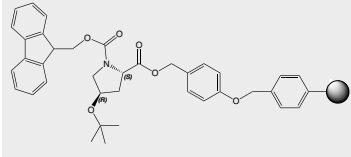
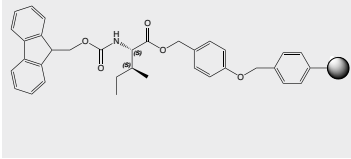
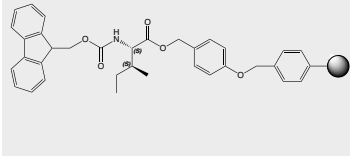
		Article No.	Quantity	Price	
Fmoc-L-Asp(tBu)-Wang Resin		WAA11305			
PARTICLE SIZE	100-200 mesh	WAA11305.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA11305.0005	5 g	180,00	
		WAA11305.0025	25 g	710,00	
Fmoc-L-Asp(tBu)-Wang Resin		WAA41305			
PARTICLE SIZE	200-400 mesh	WAA41305.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA41305.0005	5 g	180,00	
		WAA41305.0025	25 g	710,00	
SYNONYMS Fmoc-L-Asp(OtBu)-Wang Resin, Fmoc-Asp(OtBu)-Wang Resin					
Fmoc-D-Asp(tBu)-Wang Resin		WAA6110			
Fmoc-D-Asp(OtBu)-Wang Resin		WAA6110.0001	1 g	70,00	
PARTICLE SIZE	100-200 mesh	WAA6110.0005	5 g	240,00	
CROSSLINKING	1% DVB				
SYNONYMS Fmoc-D-Asp(OtBu)-Wang Resin					
Fmoc-L-Asp(Wang-Resin)-OAll		CAA1002			
N-alpha-(9-Fluorenylmethoxycarbonyl)-L-Asp(Wang-Resin)-OAll		CAA1002.0005	5 g	640,00	
LOADING	0.15-0.5 mmol/g	CAA1002.0025	25 g	2200,00	
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
Fmoc-L-Cys(Acm)-Wang Resin		WAA11307			
Fmoc-L-Cys(S-Acm)-Wang Resin		WAA11307.0001	1 g	70,00	
PARTICLE SIZE	100-200 mesh	WAA11307.0005	5 g	260,00	
CROSSLINKING	1% DVB	WAA11307.0025	25 g	1010,00	
Fmoc-L-Cys(Acm)-Wang Resin		WAA41307			
PARTICLE SIZE	200-400 mesh	WAA41307.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA41307.0005	5 g	260,00	
		WAA41307.0025	25 g	1010,00	
Fmoc-L-Cys(SS-tBu)-Wang Resin		WAA11309			
Fmoc-L-Cys(S-S-tBu)-Wang Resin		WAA11309.0001	1 g	110,00	
PARTICLE SIZE	100-200 mesh	WAA11309.0005	5 g	410,00	
CROSSLINKING	1% DVB	WAA11309.0025	25 g	1630,00	

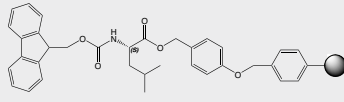
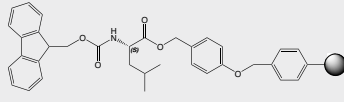
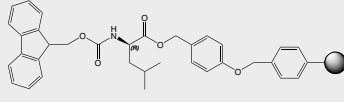
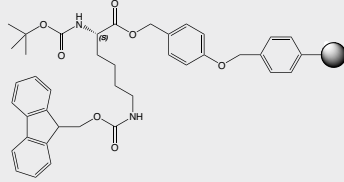
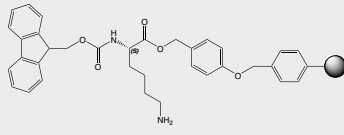
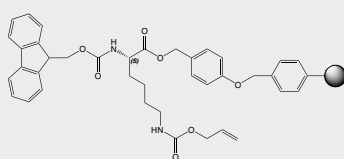
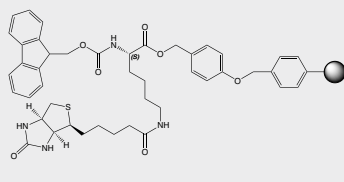
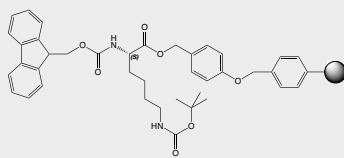
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	Article No.	Quantity	Price	
Fmoc-L-Cys(SS-tBu)-Wang Resin			WAA41309	
Fmoc-L-Cys(S-S-tBu)-Wang Resin	WAA41309.0001	1 g	110,00	
PARTICLE SIZE 200-400 mesh	WAA41309.0005	5 g	410,00	
CROSSLINKING 1% DVB	WAA41309.0025	25 g	1630,00	
Fmoc-L-Cys(S-tBu)-Wang Resin			WAA11308	
PARTICLE SIZE 100-200 mesh	WAA11308.0001	1 g	60,00	
CROSSLINKING 1% DVB	WAA11308.0005	5 g	200,00	
	WAA11308.0025	25 g	780,00	
Fmoc-L-Cys(S-tBu)-Wang Resin			WAA41308	
PARTICLE SIZE 200-400 mesh	WAA41308.0001	1 g	60,00	
CROSSLINKING 1% DVB	WAA41308.0005	5 g	200,00	
	WAA41308.0025	25 g	780,00	
Fmoc-L-Cys(Trt)-Wang Resin			WAA11306	
PARTICLE SIZE 100-200 mesh	WAA11306.0001	1 g	70,00	
CROSSLINKING 1% DVB	WAA11306.0005	5 g	260,00	
	WAA11306.0025	25 g	1010,00	
Fmoc-L-Cys(Trt)-Wang Resin			WAA41306	
PARTICLE SIZE 200-400 mesh	WAA41306.0001	1 g	70,00	
CROSSLINKING 1% DVB	WAA41306.0005	5 g	260,00	
	WAA41306.0025	25 g	1010,00	
Fmoc-D-Cys(Trt)-Wang Resin			WAA6118	
PARTICLE SIZE 100-200 mesh	WAA6118.0001	1 g	130,00	
CROSSLINKING 1% DVB	WAA6118.0005	5 g	500,00	
Fmoc-L-Glu(tBu)-Wang Resin			WAA11312	
PARTICLE SIZE 100-200 mesh	WAA11312.0001	1 g	50,00	
CROSSLINKING 1% DVB	WAA11312.0005	5 g	190,00	
	WAA11312.0025	25 g	760,00	
SYNONYMS	Fmoc-L-Glu(OtBu)-Wang Resin, Fmoc-Glu(OtBu)-Wang Resin			

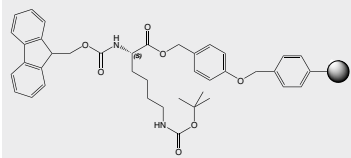
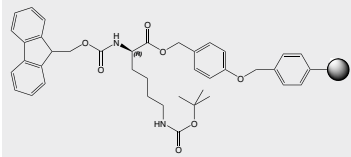
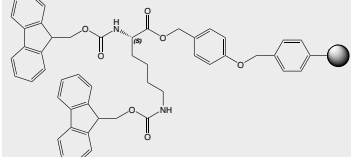
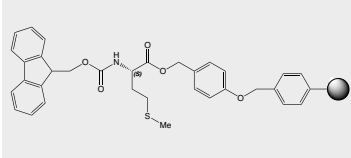
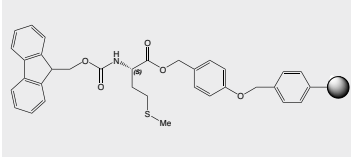
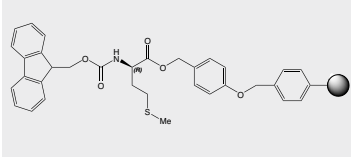
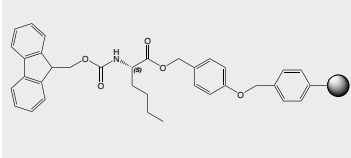
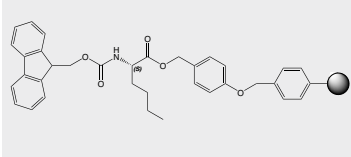
		Article No.	Quantity	Price	
Fmoc-L-Glu(tBu)-Wang Resin		WAA41312			
PARTICLE SIZE	200-400 mesh	WAA41312.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA41312.0005	5 g	190,00	
		WAA41312.0025	25 g	760,00	
SYNONYMS Fmoc-L-Glu(OtBu)-Wang Resin, Fmoc-Glu(OtBu)-Wang Resin					
Fmoc-D-Glu(tBu)-Wang Resin		WAA6120			
Fmoc-D-Glu(OBut)-Wang Resin		WAA6120.0001	1 g	120,00	
PARTICLE SIZE	100-200 mesh	WAA6120.0005	5 g	450,00	
CROSSLINKING	1% DVB				
SYNONYMS Fmoc-D-Glu(OtBu)-Wang Resin					
Fmoc-L-Glu(Wang-Resin)-OAll		CAA1004			
LOADING	0.15-0.5 mmol/g	CAA1004.0000	please inquire		
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
Fmoc-L-Gln(Trt)-Wang Resin		WAA11310			
PARTICLE SIZE	100-200 mesh	WAA11310.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA11310.0005	5 g	290,00	
		WAA11310.0025	25 g	1130,00	
Fmoc-L-Gln(Trt)-Wang Resin		WAA41310			
PARTICLE SIZE	200-400 mesh	WAA41310.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA41310.0005	5 g	290,00	
		WAA41310.0025	25 g	1130,00	
Fmoc-Gly-Wang Resin		WAA11313			
PARTICLE SIZE	100-200 mesh	WAA11313.0005	5 g	100,00	
CROSSLINKING	1% DVB	WAA11313.0025	25 g	380,00	
Fmoc-Gly-Wang Resin		WAA41313			
PARTICLE SIZE	200-400 mesh	WAA41313.0005	5 g	100,00	
CROSSLINKING	1% DVB	WAA41313.0025	25 g	380,00	

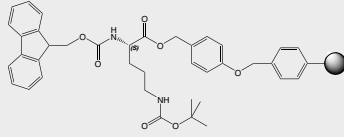
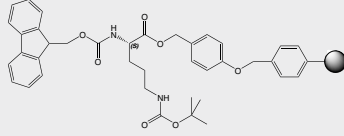
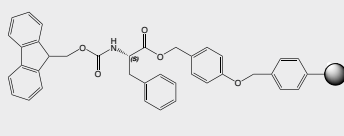
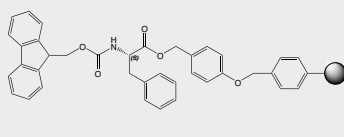
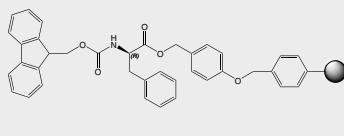
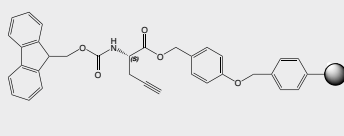
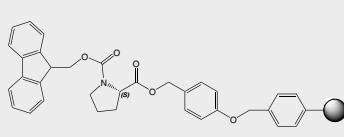
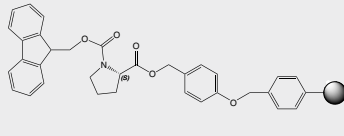
Prices are in EUR, net, exw Germany

		Article No.	Quantity	Price	
Fmoc-Sar-Wang Resin		WAA5132			
PARTICLE SIZE	100-200 mesh	WAA5132.0005	5 g	140,00	
CROSSLINKING	1% DVB	WAA5132.0025	25 g	550,00	
Fmoc-L-His(Trt)-Wang Resin		WAA11314			
PARTICLE SIZE	100-200 mesh	WAA11314.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA11314.0005	5 g	260,00	
		WAA11314.0025	25 g	1010,00	
Fmoc-L-His(Trt)-Wang Resin		WAA41314			
PARTICLE SIZE	200-400 mesh	WAA41314.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA41314.0005	5 g	260,00	
		WAA41314.0025	25 g	1010,00	
Fmoc-D-His(Trt)-Wang Resin		WAA6136			
PARTICLE SIZE	100-200 mesh	WAA6136.0001	1 g	130,00	
CROSSLINKING	1% DVB	WAA6136.0005	5 g	500,00	
Fmoc-L-Hse(Trt)-Wang Resin		WAA2445			
PARTICLE SIZE	100-200 mesh	WAA2445.0001	1 g	140,00	
CROSSLINKING	1% DVB	WAA2445.0005	5 g	525,00	
Fmoc-L-Hyp(tBu)-Wang Resin		WAA5167			
PARTICLE SIZE	100-200 mesh	WAA5167.0001	1 g	80,00	
CROSSLINKING	1% DVB	WAA5167.0005	5 g	275,00	
Fmoc-L-Ile-Wang Resin		WAA11315			
PARTICLE SIZE	100-200 mesh	WAA11315.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA11315.0005	5 g	100,00	
		WAA11315.0025	25 g	380,00	
Fmoc-L-Ile-Wang Resin		WAA41315			
PARTICLE SIZE	200-400 mesh	WAA41315.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA41315.0005	5 g	100,00	
		WAA41315.0025	25 g	380,00	

		Article No.	Quantity	Price	
Fmoc-L-Leu-Wang Resin		WAA11316			
PARTICLE SIZE	100-200 mesh	WAA11316.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA11316.0005	5 g	100,00	
		WAA11316.0025	25 g	380,00	
Fmoc-L-Leu-Wang Resin		WAA41316			
PARTICLE SIZE	200-400 mesh	WAA41316.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA41316.0005	5 g	100,00	
		WAA41316.0025	25 g	380,00	
Fmoc-D-Leu-Wang Resin		WAA6145			
PARTICLE SIZE	100-200 mesh	WAA6145.0001	1 g	80,00	
CROSSLINKING	1% DVB	WAA6145.0005	5 g	275,00	
Boc-L-Lys(Fmoc)-Wang Resin		WAA5151			
PARTICLE SIZE	100-200 mesh	WAA5151.0005	5 g	280,00	
CROSSLINKING	1% DVB	WAA5151.0025	25 g	1100,00	
Fmoc-L-Lys-Wang Resin		WAA5155			
PARTICLE SIZE	100-200 mesh	WAA5155.0000	please inquire		
CROSSLINKING	1% DVB				
Fmoc-L-Lys(Aloc)-Wang Resin		WAA5153			
PARTICLE SIZE	100-200 mesh	WAA5153.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA5153.0005	5 g	150,00	
Fmoc-L-Lys(Biotin)-Wang Resin		WAA5154			
PARTICLE SIZE	100-200 mesh	WAA5154.0001	1 g	375,00	
CROSSLINKING	1% DVB	WAA5154.0005	5 g	1475,00	
Fmoc-L-Lys(Boc)-Wang Resin		WAA11317			
PARTICLE SIZE	100-200 mesh	WAA11317.0005	5 g	190,00	
CROSSLINKING	1% DVB	WAA11317.0025	25 g	760,00	

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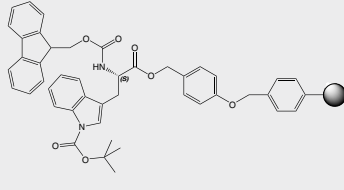
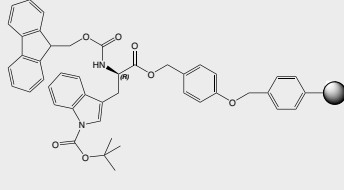
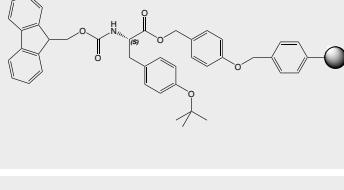
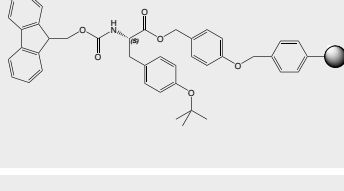
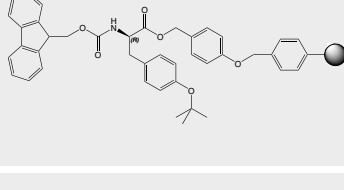
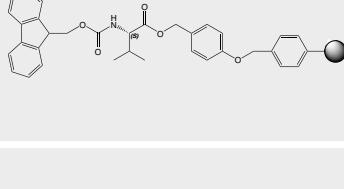
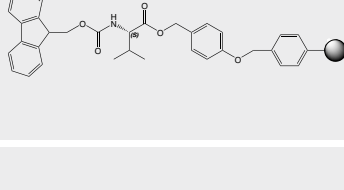
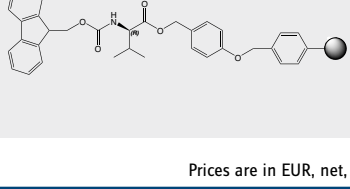
		Article No.	Quantity	Price	
Fmoc-L-Lys(Boc)-Wang Resin		WAA41317			
PARTICLE SIZE	200-400 mesh	WAA41317.0005	5 g	190,00	
CROSSLINKING	1% DVB	WAA41317.0025	25 g	760,00	
Fmoc-D-Lys(Boc)-Wang Resin		WAA6150			
PARTICLE SIZE	100-200 mesh	WAA6150.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6150.0005	5 g	450,00	
Fmoc-L-Lys(Fmoc) Wang Resin		WAA5156			
PARTICLE SIZE	100-200 mesh	WAA5156.0001	1 g	60,00	
CROSSLINKING	1% DVB	WAA5156.0005	5 g	180,00	
Fmoc-L-Met-Wang Resin		WAA11318			
PARTICLE SIZE	100-200 mesh	WAA11318.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA11318.0005	5 g	100,00	
		WAA11318.0025	25 g	380,00	
Fmoc-L-Met-Wang Resin		WAA41318			
PARTICLE SIZE	200-400 mesh	WAA41318.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA41318.0005	5 g	100,00	
		WAA41318.0025	25 g	380,00	
Fmoc-D-Met-Wang Resin		WAA6155			
PARTICLE SIZE	100-200 mesh	WAA6155.0001	1 g	75,00	
CROSSLINKING	1% DVB	WAA6155.0005	5 g	250,00	
Fmoc-L-Nle-Wang Resin		WAA11319			
PARTICLE SIZE	100-200 mesh	WAA11319.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA11319.0005	5 g	260,00	
		WAA11319.0025	25 g	1010,00	
Fmoc-L-Nle-Wang Resin		WAA41319			
PARTICLE SIZE	200-400 mesh	WAA41319.0001	1 g	70,00	
CROSSLINKING	1% DVB	WAA41319.0005	5 g	260,00	
		WAA41319.0025	25 g	1010,00	

	Article No.	Quantity	Price	
Fmoc-L-Orn(Boc)-Wang Resin			WAA11320	
PARTICLE SIZE	100-200 mesh	WAA11320.0001	1 g 90,00	
CROSSLINKING	1% DVB	WAA11320.0005	5 g 350,00	
		WAA11320.0025	25 g 1400,00	
Fmoc-L-Orn(Boc)-Wang Resin			WAA41320	
PARTICLE SIZE	200-400 mesh	WAA41320.0001	1 g 90,00	
CROSSLINKING	1% DVB	WAA41320.0005	5 g 350,00	
		WAA41320.0025	25 g 1400,00	
Fmoc-L-Phe-Wang Resin			WAA11321	
PARTICLE SIZE	100-200 mesh	WAA11321.0001	1 g 30,00	
CROSSLINKING	1% DVB	WAA11321.0005	5 g 100,00	
		WAA11321.0025	25 g 380,00	
Fmoc-L-Phe-Wang Resin			WAA41321	
PARTICLE SIZE	200-400 mesh	WAA41321.0001	1 g 30,00	
CROSSLINKING	1% DVB	WAA41321.0005	5 g 100,00	
		WAA41321.0025	25 g 380,00	
Fmoc-D-Phe-Wang Resin			WAA6160	
PARTICLE SIZE	100-200 mesh	WAA6160.0001	1 g 80,00	
CROSSLINKING	1% DVB	WAA6160.0005	5 g 300,00	
Fmoc-L-Pra-Wang Resin			WAA6025	
Fmoc-L-Propargylglycine-Wang Resin		WAA6025.0001	1 g 175,00	
PARTICLE SIZE	100-200 mesh	WAA6025.0005	5 g 600,00	
CROSSLINKING	1% DVB			
DESCRIPTION Sogawa, H. <i>et al.</i> J. Poly. Sci., Part A: Polym. Chem. 2012; 50: 2008.				
Fmoc-L-Pro-Wang Resin			WAA11322	
PARTICLE SIZE	100-200 mesh	WAA11322.0001	1 g 30,00	
CROSSLINKING	1% DVB	WAA11322.0005	5 g 100,00	
		WAA11322.0025	25 g 380,00	
Fmoc-L-Pro-Wang Resin			WAA41322	
PARTICLE SIZE	200-400 mesh	WAA41322.0001	1 g 30,00	
CROSSLINKING	1% DVB	WAA41322.0005	5 g 100,00	
		WAA41322.0025	25 g 380,00	

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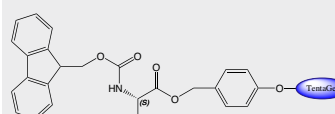
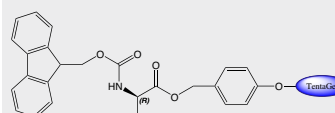
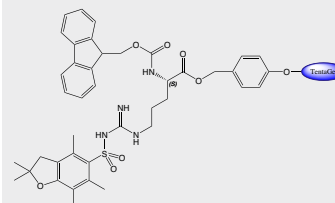
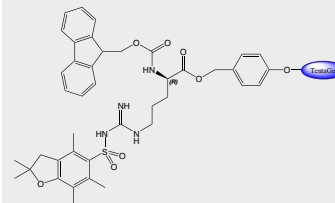
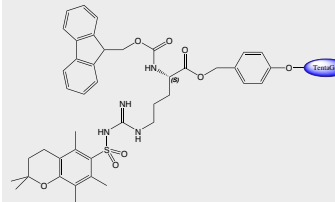
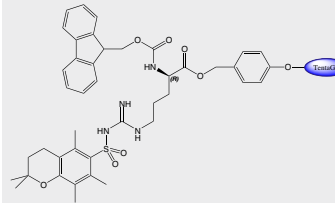
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Fmoc-D-Pro-Wang Resin		WAA6165			
PARTICLE SIZE	100-200 mesh	WAA6165.0001	1 g	80,00	
CROSSLINKING	1% DVB	WAA6165.0005	5 g	275,00	
Fmoc-L-Ser(tBu)-Wang Resin		WAA11323			
PARTICLE SIZE	100-200 mesh	WAA11323.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA11323.0005	5 g	180,00	
		WAA11323.0025	25 g	690,00	
Fmoc-L-Ser(tBu)-Wang Resin		WAA41323			
PARTICLE SIZE	200-400 mesh	WAA41323.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA41323.0005	5 g	180,00	
		WAA41323.0025	25 g	690,00	
Fmoc-D-Ser(tBu)-Wang Resin		WAA6170			
PARTICLE SIZE	100-200 mesh	WAA6170.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6170.0005	5 g	450,00	
Fmoc-L-Thr(tBu)-Wang Resin		WAA11324			
PARTICLE SIZE	100-200 mesh	WAA11324.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA11324.0005	5 g	180,00	
		WAA11324.0025	25 g	690,00	
Fmoc-L-Thr(tBu)-Wang Resin		WAA41324			
PARTICLE SIZE	200-400 mesh	WAA41324.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA41324.0005	5 g	180,00	
		WAA41324.0025	25 g	690,00	
Fmoc-D-Thr(tBu)-Wang Resin		WAA6175			
PARTICLE SIZE	100-200 mesh	WAA6175.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6175.0005	5 g	450,00	
Fmoc-L-Trp(Boc)-Wang Resin		WAA11328			
PARTICLE SIZE	100-200 mesh	WAA11328.0001	1 g	100,00	
CROSSLINKING	1% DVB	WAA11328.0005	5 g	380,00	
		WAA11328.0025	25 g	1510,00	

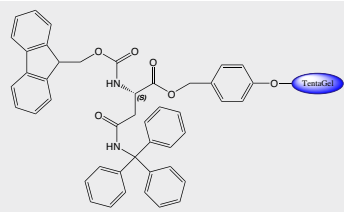
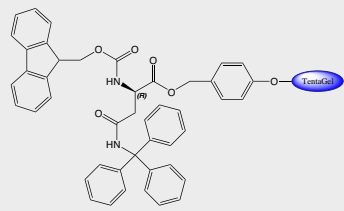
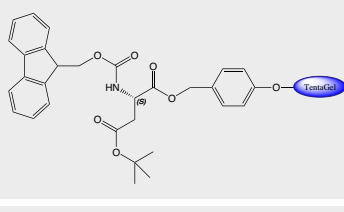
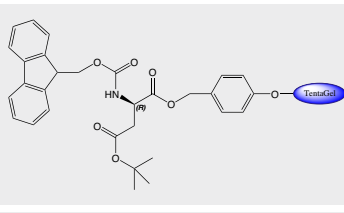
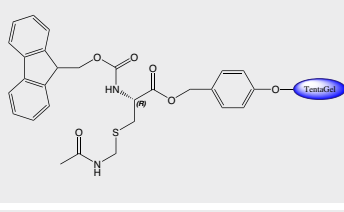
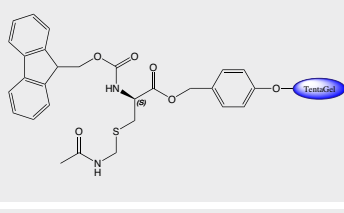
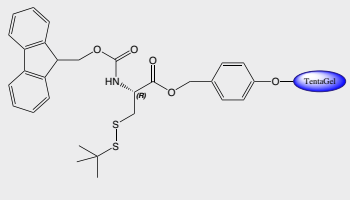
		Article No.	Quantity	Price	
Fmoc-L-Trp(Boc)-Wang Resin		WAA41328			
PARTICLE SIZE	200-400 mesh	WAA41328.0001	1 g	100,00	
CROSSLINKING	1% DVB	WAA41328.0005	5 g	380,00	
		WAA41328.0025	25 g	1510,00	
Fmoc-D-Trp(Boc)-Wang Resin		WAA6181			
PARTICLE SIZE	100-200 mesh	WAA6181.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6181.0005	5 g	425,00	
Fmoc-L-Tyr(tBu)-Wang Resin		WAA11326			
PARTICLE SIZE	100-200 mesh	WAA11326.0001	1 g	50,00	
CROSSLINKING	1% DVB	WAA11326.0005	5 g	180,00	
		WAA11326.0025	25 g	710,00	
Fmoc-L-Tyr(tBu)-Wang Resin		WAA41326			
PARTICLE SIZE	200-400 mesh	WAA41326.0005	5 g	180,00	
CROSSLINKING	1% DVB	WAA41326.0025	25 g	710,00	
Fmoc-D-Tyr(tBu)-Wang Resin		WAA6185			
PARTICLE SIZE	100-200 mesh	WAA6185.0001	1 g	120,00	
CROSSLINKING	1% DVB	WAA6185.0005	5 g	450,00	
Fmoc-L-Val-Wang Resin		WAA11327			
PARTICLE SIZE	100-200 mesh	WAA11327.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA11327.0005	5 g	100,00	
		WAA11327.0025	25 g	380,00	
Fmoc-L-Val-Wang Resin		WAA41327			
PARTICLE SIZE	200-400 mesh	WAA41327.0001	1 g	30,00	
CROSSLINKING	1% DVB	WAA41327.0005	5 g	100,00	
		WAA41327.0025	25 g	380,00	
Fmoc-D-Val-Wang Resin		WAA6190			
PARTICLE SIZE	100-200 mesh	WAA6190.0001	1 g	80,00	
CROSSLINKING	1% DVB	WAA6190.0005	5 g	290,00	

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9.2.8. Preloaded Wang-TentaGel® Resins

TentaGel® resins consist of low cross-linked polystyrene on which poly(ethylene glycol) with a molecular weight of 3000 Da is grafted. The PEG spacer is attached to the polymer matrix via an ether bond, which shows high stability towards acid treatment and minimizes PEG leaching. The properties of TentaGel® resins are dominated by PEG, which solubilizes both hydrophobic and hydrophilic compounds. TentaGel® resins are pressure stable and can be used in batch processes as well as under continuous flow conditions.

	Article No.	Quantity	Price	
Fmoc-L-Ala-Wang TG			SAL1301	
Fmoc-L-Ala-Wang TentaGel S	SAL1301.0001	1 g	60,00	
LOADING 0.2-0.25 mmol/g	SAL1301.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1301.0025	25 g	770,00	
Fmoc-D-Ala-Wang TG			SAD1301	
Fmoc-D-Ala-Wang TentaGel S	SAD1301.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAD1301.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1301.0025	25 g	1460,00	
Fmoc-L-Arg(Pbf)-Wang TG			SAL1302	
Fmoc-L-Arg(Pbf)-Wang TentaGel S	SAL1302.0001	1 g	100,00	
LOADING 0.15-0.25 mmol/g	SAL1302.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1302.0025	25 g	1420,00	
Fmoc-D-Arg(Pbf)-Wang TG			SAD1302	
Fmoc-D-Arg(Pbf)-Wang TentaGel S	SAD1302.0001	1 g	110,00	
LOADING 0.15-0.25 mmol/g	SAD1302.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1302.0025	25 g	1860,00	
Fmoc-L-Arg(Pmc)-Wang TG			SAL1303	
Fmoc-L-Arg(Pmc)-Wang TentaGel S	SAL1303.0001	1 g	100,00	
LOADING 0.15-0.25 mmol/g	SAL1303.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1303.0025	25 g	1420,00	
Fmoc-D-Arg(Pmc)-Wang TG			SAD1303	
Fmoc-D-Arg(Pmc)-Wang TentaGel S	SAD1303.0001	1 g	110,00	
LOADING 0.15-0.25 mmol/g	SAD1303.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1303.0025	25 g	1860,00	

	Article No.	Quantity	Price	
Fmoc-L-Asn(Trt)-Wang TG			SAL1304	
Fmoc-L-Asn(Trt)-Wang TentaGel S	SAL1304.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1304.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1304.0025	25 g	960,00	
Fmoc-D-Asn(Trt)-Wang TG			SAD1304	
Fmoc-D-Asn(Trt)-Wang TentaGel S	SAD1304.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1304.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1304.0025	25 g	1860,00	
Fmoc-L-Asp(tBu)-Wang TG			SAL1305	
Fmoc-L-Asp(tBu)-Wang TentaGel S	SAL1305.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1305.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1305.0025	25 g	960,00	
SYNONYMS Fmoc-L-Asp(OtBu)-Wang TentaGel, Fmoc-Asp(OtBu)-Wang TentaGel				
Fmoc-D-Asp(tBu)-Wang TG			SAD1305	
Fmoc-D-Asp(tBu)-Wang TentaGel S	SAD1305.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1305.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1305.0025	25 g	1860,00	
Fmoc-L-Cys(Acm)-Wang TG			SAL1307	
Fmoc-L-Cys(S-Acm)-Wang TentaGel S	SAL1307.0001	1 g	100,00	
LOADING 0.2-0.25 mmol/g	SAL1307.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1307.0025	25 g	1420,00	
Fmoc-D-Cys(Acm)-Wang TG			SAD1307	
Fmoc-D-Cys(S-Acm)-Wang TentaGel S	SAD1307.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1307.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1307.0025	25 g	1860,00	
Fmoc-L-Cys(SS-tBu)-Wang TG			SAL1309	
Fmoc-L-Cys(S-S-tBu)-Wang TentaGel S	SAL1309.0001	1 g	100,00	
LOADING 0.2-0.25 mmol/g	SAL1309.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1309.0025	25 g	1420,00	

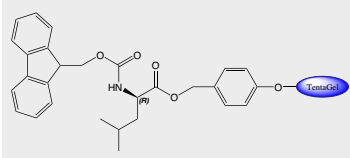
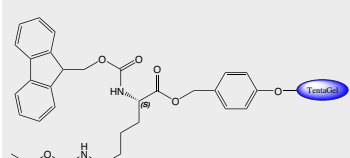
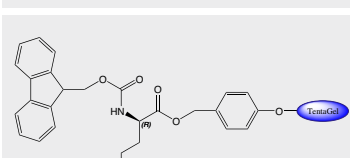
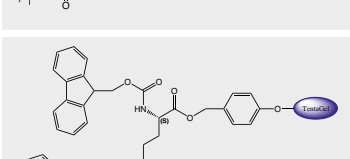
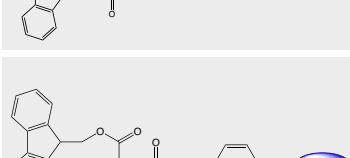
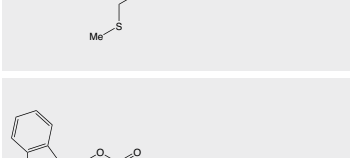
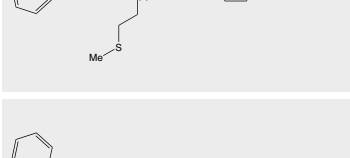
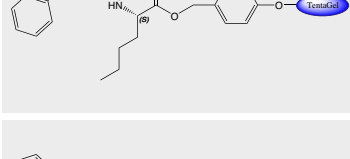
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	Article No.	Quantity	Price	
Fmoc-D-Cys(SS-tBu)-Wang TG				SAD1309
Fmoc-D-Cys(S-S-tBu)-Wang TentaGel S	SAD1309.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1309.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1309.0025	25 g	1860,00	
Fmoc-L-Cys(S-tBu)-Wang TG				SAL1308
Fmoc-L-Cys(S-tBu)-Wang TentaGel S	SAL1308.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1308.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1308.0025	25 g	960,00	
Fmoc-D-Cys(S-tBu)-Wang TG				SAD1308
Fmoc-D-Cys(S-tBu)-Wang TentaGel S	SAD1308.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1308.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1308.0025	25 g	1860,00	
Fmoc-L-Cys(Trt)-Wang TG				SAL1306
Fmoc-L-Cys(Trt)-Wang TentaGel S	SAL1306.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1306.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1306.0025	25 g	960,00	
Fmoc-D-Cys(Trt)-Wang TG				SAD1306
Fmoc-D-Cys(Trt)-Wang TentaGel S	SAD1306.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1306.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1306.0025	25 g	1860,00	
Fmoc-L-Gln(Trt)-Wang TG				SAL1310
Fmoc-L-Gln(Trt)-Wang TentaGel S	SAL1310.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1310.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1310.0025	25 g	960,00	
Fmoc-D-Gln(Trt)-Wang TG				SAD1310
Fmoc-D-Gln(Trt)-Wang TentaGel S	SAD1310.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1310.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1310.0025	25 g	1860,00	
Fmoc-L-Glu(tBu)-Wang TG				SAL1312
Fmoc-L-Glu(tBu)-Wang TentaGel S	SAL1312.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1312.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1312.0025	25 g	960,00	
SYNONYMS	Fmoc-L-Glu(OtBu)-Wang TentaGel, Fmoc-Glu(OtBu)-Wang TentaGel			

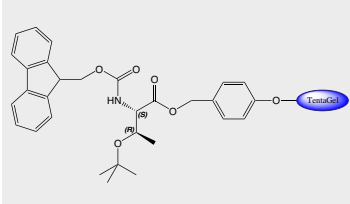
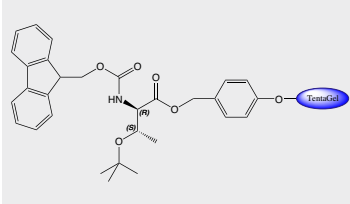
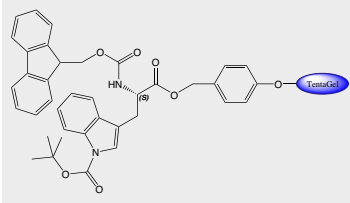
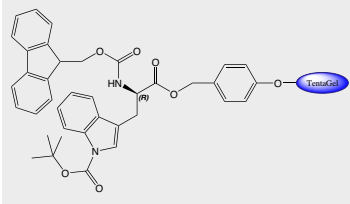
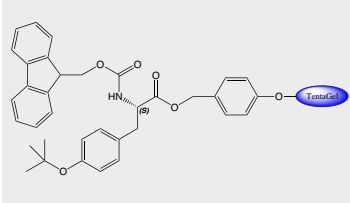
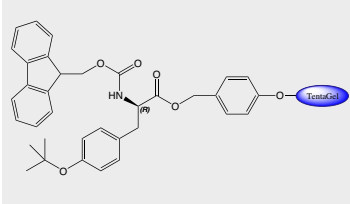
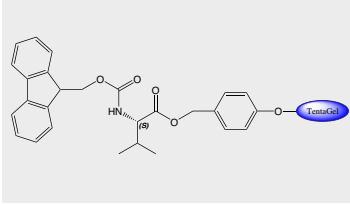
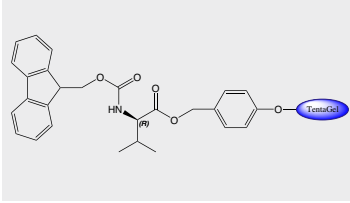
	Article No.	Quantity	Price	
Fmoc-D-Glu(tBu)-Wang TG				SAD1312
Fmoc-D-Glu(tBu)-Wang TentaGel S	SAD1312.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1312.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1312.0025	25 g	1860,00	
SYNONYMS	Fmoc-D-Glu(OtBu)-Wang TentaGel			
Fmoc-Gly-Wang TG				SAL1313
Fmoc-Gly-Wang TentaGel S	SAL1313.0001	1 g	60,00	
LOADING 0.2-0.22 mmol/g	SAL1313.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1313.0025	25 g	770,00	
Fmoc-L-His(Trt)-Wang TG				SAL1314
Fmoc-L-His(Trt)-Wang TentaGel S	SAL1314.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1314.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1314.0025	25 g	960,00	
Fmoc-D-His(Trt)-Wang TG				SAD1314
Fmoc-D-His(Trt)-Wang TentaGel S	SAD1314.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1314.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1314.0025	25 g	1860,00	
Fmoc-L-Ile-Wang TG				SAL1315
Fmoc-L-Ile-Wang TentaGel S	SAL1315.0001	1 g	60,00	
LOADING 0.2-0.25 mmol/g	SAL1315.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1315.0025	25 g	770,00	
Fmoc-D-Ile-Wang TG				SAD1315
Fmoc-D-Ile-Wang TentaGel S	SAD1315.0001	1 g	210,00	
LOADING 0.2-0.25 mmol/g	SAD1315.0005	5 g	800,00	
PARTICLE SIZE 90 µm	SAD1315.0025	25 g	3170,00	
Fmoc-L-Leu-Wang TG				SAL1316
Fmoc-L-Leu-Wang TentaGel S	SAL1316.0001	1 g	60,00	
LOADING 0.2-0.25 mmol/g	SAL1316.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1316.0025	25 g	770,00	

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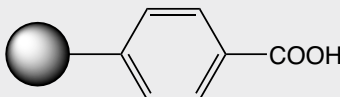
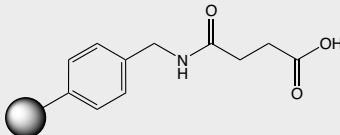
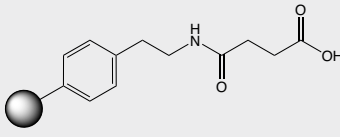
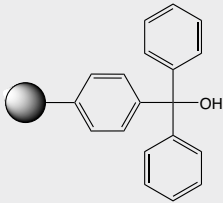
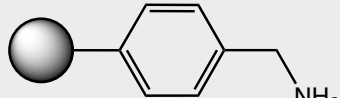
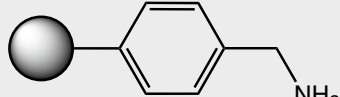
	Article No.	Quantity	Price	
Fmoc-D-Leu-Wang TG				SAD1316
Fmoc-D-Leu-Wang TentaGel S	SAD1316.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAD1316.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1316.0025	25 g	1460,00	
Fmoc-L-Lys(Boc)-Wang TG				SAL1317
Fmoc-L-Lys(Boc)-Wang TentaGel S	SAL1317.0001	1 g	70,00	
LOADING 0.2-0.22 mmol/g	SAL1317.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1317.0025	25 g	960,00	
Fmoc-D-Lys(Boc)-Wang TG				SAD1317
Fmoc-D-Lys(Boc)-Wang TentaGel S	SAD1317.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1317.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1317.0025	25 g	1860,00	
Fmoc-L-Lys(Fmoc)-Wang TG				SAL2000
Fmoc-L-Lys(Fmoc)-Wang TentaGel S	SAL2000.0000		please inquire	
LOADING 0.2-0.22 mmol/g				
PARTICLE SIZE 90 µm				
Fmoc-L-Met-Wang TG				SAL1318
Fmoc-L-Met-Wang TentaGel S	SAL1318.0001	1 g	60,00	
LOADING 0.2-0.25 mmol/g	SAL1318.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1318.0025	25 g	770,00	
Fmoc-D-Met-Wang TG				SAD1318
Fmoc-D-Met-Wang TentaGel S	SAD1318.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAD1318.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1318.0025	25 g	1460,00	
Fmoc-L-Nle-Wang TG				SAL1319
Fmoc-L-Nle-Wang TentaGel S	SAL1319.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1319.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1319.0025	25 g	960,00	
Fmoc-D-Nle-Wang TG				SAD1319
Fmoc-D-Nle-Wang TentaGel S	SAD1319.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1319.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1319.0025	25 g	1860,00	

	Article No.	Quantity	Price		
Fmoc-L-Orn(Boc)-Wang TG				SAL1320	
Fmoc-L-Orn(Boc)-Wang TentaGel S	SAL1320.0001	1 g	100,00		
LOADING 0.2-0.25 mmol/g	SAL1320.0005	5 g	380,00		
PARTICLE SIZE 90 µm	SAL1320.0025	25 g	1420,00		
Fmoc-D-Orn(Boc)-Wang TG				SAD1320	
Fmoc-D-Orn(Boc)-Wang TentaGel S	SAD1320.0001	1 g	110,00		
LOADING 0.2-0.25 mmol/g	SAD1320.0005	5 g	470,00		
PARTICLE SIZE 90 µm	SAD1320.0025	25 g	1860,00		
Fmoc-L-Phe-Wang TG				SAL1321	
Fmoc-L-Phe-Wang TentaGel S	SAL1321.0001	1 g	60,00		
LOADING 0.2-0.25 mmol/g	SAL1321.0005	5 g	200,00		
PARTICLE SIZE 90 µm	SAL1321.0025	25 g	770,00		
Fmoc-D-Phe-Wang TG				SAD1321	
Fmoc-D-Phe-Wang TentaGel S	SAD1321.0001	1 g	90,00		
LOADING 0.2-0.25 mmol/g	SAD1321.0005	5 g	370,00		
PARTICLE SIZE 90 µm	SAD1321.0025	25 g	1460,00		
Fmoc-L-Pro-Wang TG				SAL1322	
Fmoc-L-Pro-Wang TentaGel S	SAL1322.0001	1 g	60,00		
LOADING 0.2-0.25 mmol/g	SAL1322.0005	5 g	200,00		
PARTICLE SIZE 90 µm	SAL1322.0025	25 g	770,00		
Fmoc-D-Pro-Wang TG				SAD1322	
Fmoc-D-Pro-Wang TentaGel S	SAD1322.0001	1 g	90,00		
LOADING 0.2-0.25 mmol/g	SAD1322.0005	5 g	370,00		
PARTICLE SIZE 90 µm	SAD1322.0025	25 g	1460,00		
Fmoc-L-Ser(tBu)-Wang TG				SAL1323	
Fmoc-L-Ser(tBu)-Wang TentaGel S	SAL1323.0001	1 g	70,00		
LOADING 0.2-0.25 mmol/g	SAL1323.0005	5 g	230,00		
PARTICLE SIZE 90 µm	SAL1323.0025	25 g	960,00		
Fmoc-D-Ser(tBu)-Wang TG				SAD1323	
Fmoc-D-Ser(tBu)-Wang TentaGel S	SAD1323.0001	1 g	110,00		
LOADING 0.2-0.25 mmol/g	SAD1323.0005	5 g	470,00		
PARTICLE SIZE 90 µm	SAD1323.0025	25 g	1860,00		

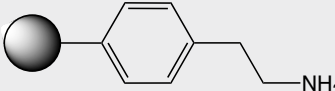
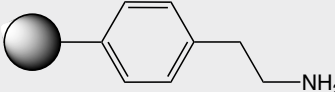
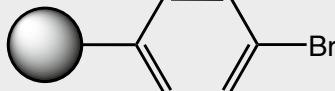
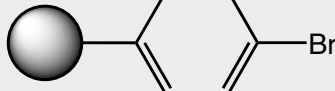
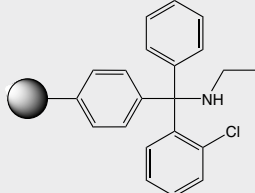
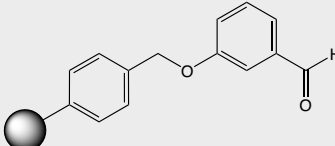
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	Article No.	Quantity	Price	
Fmoc-L-Thr(tBu)-Wang TG			SAL1324	
Fmoc-L-Thr(tBu)-Wang TentaGel S	SAL1324.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1324.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1324.0025	25 g	960,00	
Fmoc-D-Thr(tBu)-Wang TG			SAD1324	
Fmoc-D-Thr(tBu)-Wang TentaGel S	SAD1324.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1324.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1324.0025	25 g	1860,00	
Fmoc-L-Trp(Boc)-Wang TG			SAL1328	
Fmoc-L-Trp(Boc)-Wang TentaGel S	SAL1328.0001	1 g	100,00	
LOADING 0.2-0.25 mmol/g	SAL1328.0005	5 g	380,00	
PARTICLE SIZE 90 µm	SAL1328.0025	25 g	1420,00	
Fmoc-D-Trp(Boc)-Wang TG			SAD1328	
Fmoc-D-Trp(Boc)-Wang TentaGel S	SAD1328.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1328.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1328.0025	25 g	1860,00	
Fmoc-L-Tyr(tBu)-Wang TG			SAL1326	
Fmoc-L-Tyr(tBu)-Wang TentaGel S	SAL1326.0001	1 g	70,00	
LOADING 0.2-0.25 mmol/g	SAL1326.0005	5 g	230,00	
PARTICLE SIZE 90 µm	SAL1326.0025	25 g	960,00	
Fmoc-D-Tyr(tBu)-Wang TG			SAD1326	
Fmoc-D-Tyr(tBu)-Wang TentaGel S	SAD1326.0001	1 g	110,00	
LOADING 0.2-0.25 mmol/g	SAD1326.0005	5 g	470,00	
PARTICLE SIZE 90 µm	SAD1326.0025	25 g	1860,00	
Fmoc-L-Val-Wang TG			SAL1327	
Fmoc-L-Val-Wang TentaGel S	SAL1327.0001	1 g	60,00	
LOADING 0.2-0.25 mmol/g	SAL1327.0005	5 g	200,00	
PARTICLE SIZE 90 µm	SAL1327.0025	25 g	770,00	
Fmoc-D-Val-Wang TG			SAD1327	
Fmoc-D-Val-Wang TentaGel S	SAD1327.0001	1 g	90,00	
LOADING 0.2-0.25 mmol/g	SAD1327.0005	5 g	370,00	
PARTICLE SIZE 90 µm	SAD1327.0025	25 g	1460,00	

9.3. Scavenger Resins

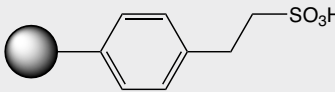
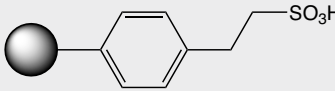
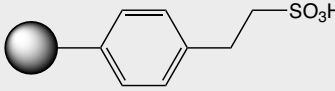
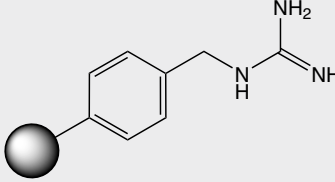
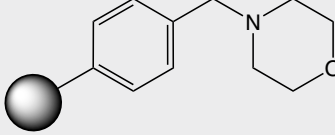
	Article No.	Quantity	Price	
Polystyrene-COOH				SR-1130
Benzoic acid polystyrene (rigid, macroporous)	SR-1130.0005	5 g	50,00	
LOADING 0.5-2.0 mmol/g	SR-1130.0025	25 g	180,00	
PARTICLE SIZE 200-400µm				
DESCRIPTION	Literature: S. W. Kaldor <i>et al.</i> ; <i>Tetrahedron Lett.</i> 1996; 37 : 7193. J. R. Booth <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4882. M. W. Creswell <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 3983. D. L. Flynn <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4874. M. R. Lawrence <i>et al.</i> ; <i>Synthesis</i> 1997; 553. M. J. Suto <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 4141.			
Polystyrene-AM-COOH				BR-5258
Aminomethyl-succinamic acid polystyrene	BR-5258.0005	5 g	60,00	
LOADING 0.7-1.2 mmol/g	BR-5258.0025	25 g	220,00	
PARTICLE SIZE 400-450 µm	BR-5258.0100	100 g	760,00	
CROSSLINKING 1% DVB				
Polystyrene-AE-COOH				BR-5253
Aminoethyl-succinamic acid polystyrene	BR-5253.0005	5 g	110,00	
LOADING 0.7-1.2 mmol/g	BR-5253.0025	25 g	450,00	
PARTICLE SIZE 400-450 µm	BR-5253.0100	100 g	1590,00	
CROSSLINKING 1% DVB				
Trt-OH Resin				BR-5243
Trityl alcohol resin	BR-5243.0005	5 g	175,00	
LOADING 2.1-4.0 mmol/g	BR-5243.0025	25 g	450,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂				BR-5053
Aminomethyl polystyrene Megabeads	BR-5053.0100	100 g	250,00	
LOADING 0.5-1.0 mmol/g	BR-5053.1000	1 kg	1250,00	
PARTICLE SIZE 30-70 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Me-NH₂				BR-1410
Aminomethyl polystyrene Megabeads	BR-1410.0100	100 g	275,00	
LOADING 1.0-2.0 mmol/g	BR-1410.1000	1 kg	1350,00	
PARTICLE SIZE 30-70 mesh				
CROSSLINKING 1% DVB				

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	Article No.	Quantity	Price	
Polystyrene-Et-NH₂				BR-5267
Aminoethyl polystyrene	BR-5267.0005	5 g	110,00	
LOADING 0.8-1.3 mmol/g	BR-5267.0025	25 g	400,00	
PARTICLE SIZE 160-200 µm	BR-5267.0100	100 g	1440,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-NH₂				BR-5269
Aminoethyl polystyrene	BR-5269.0005	5 g	110,00	
LOADING 0.8-1.2 mmol/g	BR-5269.0025	25 g	400,00	
PARTICLE SIZE 400-450 µm	BR-5269.0100	100 g	1440,00	
CROSSLINKING 1% DVB				
Polystyrene-Br				BR-5081
Bromo polystyrene	BR-5081.0005	5 g	50,00	
LOADING 2-4 mmol/g	BR-5081.0025	25 g	190,00	
PARTICLE SIZE 100-200 mesh	BR-5081.0100	100 g	680,00	
CROSSLINKING 1% DVB				
Polystyrene-Br				BR-5110
Bromo polystyrene	BR-5110.0005	5 g	50,00	
LOADING 2-4 mmol/g	BR-5110.0025	25 g	190,00	
PARTICLE SIZE 200-400 mesh	BR-5110.0100	100 g	680,00	
CROSSLINKING 1% DVB				
Et-NH-2CT Resin				SR-1113
Ethylamino-2-chlorotrityl resin	SR-1113.0000		please inquire	
LOADING 0.8-1.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-3-CHO				SR-1111
3-Benzyloxybenzaldehyde polystyrene	SR-1111.0005	5 g	80,00	
LOADING 0.5-1.5 mmol/g	SR-1111.0025	25 g	225,00	
PARTICLE SIZE 100-200 mesh	SR-1111.0100	100 g	600,00	
CROSSLINKING 1% DVB				
DESCRIPTION	<p>Aldehyde Resin, polystyrene resin functionalized with an aldehyde end group. It is a polymer bound equivalent of benzaldehyde, and is highly capable of scavenging excess amines from reaction media. This product has significant advantages over other scavengers of amines in that it's fully capable of distinguishing between primary and secondary amines. Isocyanate resin is equally proficient in sequestering either, so reactions that contain both moieties are dealt with more effectively with PS-Aldehyde.</p> <p><u>Literature:</u> Frechet J. M.; <i>J. Am. Chem. Soc.</i> 1971; 93: 492-496. Cacchi S.; <i>Synthesis</i> 1979; 64-66. Creswell M. W.; <i>Tetrahedron</i> 1998; 54: 3983-3998. Hodges J. C.; <i>Synlett</i> 1999; 1: 152-158. Ley S. V.; <i>J. Comb. Chem.</i> 2000; 2: 104-107.</p>			

	Article No.	Quantity	Price		
Polystyrene-4-CHO				SR-1129	
4-(Phenethoxy)benzaldehyde polystyrene (rigid, macroporous)	SR-1129.0005	5 g	60,00		
LOADING 0.5-1.2 mmol/g PARTICLE SIZE 200-400 µm	SR-1129.0025	25 g	240,00		
DESCRIPTION	Literature: S. W. Kaldor <i>et al.</i> ; <i>Tetrahedron Lett.</i> 1996; 37 : 7193. J. R. Booth <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4882. M. W. Creswell <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 3983. D. L. Flynn <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4874. M. R. Lawrence <i>et al.</i> ; <i>Synthesis</i> 1997; 553. M. J. Suto <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 4141.				
Polystyrene-Ac				SR-1108	
Acetylpolystyrene	SR-1108.0005	5 g	70,00		
LOADING 1.0-1.5 mmol/g PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SR-1108.0025	25 g	200,00		
	SR-1108.0100	100 g	600,00		
Polystyrene-Ac				SR-1004	
Acetylpolystyrene	SR-1004.0005	5 g	180,00		
LOADING 2.0-6.0 mmol/g PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SR-1004.0025	25 g	750,00		
Polystyrene-DIC				SR-1012	
N-Isopropyl-N'-methyl-carbodiimide polystyrene	SR-1012.0000	please inquire			
LOADING 1.0-1.5 mmol PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB					
SYNONYMS	polymer bound diisopropylcarbodiimide, N-((poly(styryl)methylimino)methylene)propan-2-amine				
Polystyrene-EDC				SR-1014	
N-Ethyl-N'-(3-dimethylaminopropyl)carbodiimide polystyrene hydrochloride	SR-1014.0000	please inquire			
LOADING 1.0-2.0 mmol/g PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB					
Polystyrene-Et-SO₂Cl				SR-1073	
Polystyrene ethyl sulfonyl chloride	SR-1073.0001	1 g	70,00		
LOADING 0.8-1.5 mmol/g PARTICLE SIZE 100-200 mesh CROSSLINKING 1% DVB	SR-1073.0005	5 g	260,00		
	SR-1073.0025	25 g	1020,00		
Polystyrene-Et-SO₂Cl				SR-1119	
Polystyrene ethyl sulfonyl chloride	SR-1119.0001	1 g	70,00		
LOADING 0.8-1.5 mmol/g PARTICLE SIZE 200-400 mesh CROSSLINKING 1% DVB	SR-1119.0005	5 g	260,00		
	SR-1119.0025	25 g	1020,00		

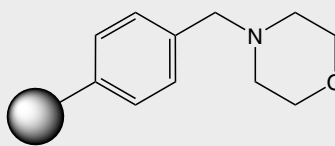
Prices are in EUR, net, exw Germany

	Article No.	Quantity	Price	
Polystyrene-Et-SO₃H				SR-1120
Polystyrene ethyl sulfonic acid	SR-1120.0001	1 g	60,00	
LOADING 0.8-1.5 mmol/g	SR-1120.0005	5 g	230,00	
PARTICLE SIZE 100-200 mesh	SR-1120.0025	25 g	850,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-SO₃H				SR-1121
Polystyrene ethyl sulfonic acid	SR-1121.0001	1 g	60,00	
LOADING 0.7-1.5 mmol/g	SR-1121.0005	5 g	230,00	
PARTICLE SIZE 200-400 mesh	SR-1121.0025	25 g	850,00	
CROSSLINKING 1% DVB				
Polystyrene-Et-SO₃H				SR-1122
Polystyrene ethyl sulfonic acid	SR-1122.0001	1 g	60,00	
LOADING 0.7-1.5 mmol/g	SR-1122.0005	5 g	230,00	
PARTICLE SIZE 400-450µm	SR-1122.0025	25 g	850,00	
CROSSLINKING 1% DVB				
Polystyrene-Guanidine				SR-1114
Guanidinomethyl polystyrene	SR-1114.0000	please inquire		
LOADING 0.5-1.5 mmol/g				
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-Morpholine				SR-1109
Morpholinomethyl polystyrene	SR-1109.0025	25 g	125,00	
LOADING 0.8-1.5 mmol/g	SR-1109.0100	100 g	350,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				

DESCRIPTION Morpholine Resin, polystyrene resin functionalized with a morpholine end group. It is a polymer bound equivalent of N-methyl-morpholine (NMM) and is capable of all reactions associated with its non-bound counterpart. Morpholine Resin, PS, is a gel-type polystyrene resin functionalized with a morpholine end group. It is commonly utilized as an acid scavenger useful for sequestering acidic residues as they are generated during reactions. Simple filtration provides the desired products while acids remain bound to the polymer. Its widely applied during the acylation and sulfonylation of amines but is competent in all environments where acid is generated and needs removal.

Literature:

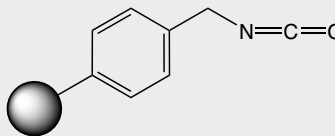
Booth R. J.; *J. Am Chem. Soc.* 1997; **119**: 4882-4886.
 Creswell M. W.; *Tetrahedron* 1998; **54**: 3983-3998.
 Blackburn C.; *Tetrahedron. Lett.* 1998; **39**: 3635-3638.
 Booth R.; *J. Acc. Chem. Res.* 1999; **32**: 18-26.
 Takayangi M.; *J. Org. Chem.* 2000; **65**: 3811-3815.
 Contour-Galcéra M.; *Bioorg. Med. Chem. Lett.* 2001; **11**: 741-745.
 Hon Y. S.; *Tetrahedron* 2003; **59**: 493-498.

		Article No.	Quantity	Price	
Polystyrene-Morpholine		SR-1123			
Morpholinomethyl polystyrene (rigid, macroporous)		SR-1123.0005	5 g	80,00	
LOADING	0.5-1.2 mmol/g	SR-1123.0025	25 g	320,00	
PARTICLE SIZE	200-400 µm				

DESCRIPTION Morpholine Resin, polystyrene resin functionalized with a morpholine end group. It is a polymer bound equivalent of N-methyl-morpholine (NMM) and is capable of all reactions associated with its non-bound counterpart. Morpholine Resin, PS, is a gel-type polystyrene resin functionalized with a morpholine end group. It is commonly utilized as an acid scavenger useful for sequestering acidic residues as they are generated during reactions. Simple filtration provides the desired products while acids remain bound to the polymer. Its widely applied during the acylation and sulfonylation of amines but is competent in all environments where acid is generated and needs removal.

Literature:

S. W. Kaldor *et al.*; *Tetrahedron Lett.* 1996; **37**: 7193.
 J. R. Booth *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4882.
 M. W. Creswell *et al.*; *Tetrahedron* 1998; **54**: 3983.
 D. L. Flynn *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4874.
 M. R. Lawrence *et al.*; *Synthesis* 1997; 553.
 M. J. Suto *et al.*; *Tetrahedron* 1998; **54**: 4141.
 Booth R. J.; *J. Am. Chem. Soc.* 1997; **119**: 4882-4886
 Creswell M. W.; *Tetrahedron* 1998; **54**: 3983-3998.
 Blackburn C.; *Tetrahedron. Lett.* 1998; **39**: 3635-3638.
 Booth R.; *J. Acc. Chem. Res.* 1999; **32**: 18-26.
 Takayangi M.; *J. Org. Chem.* 2000; **65**: 3811-3815.
 Contour-Galcera M.; *Bioorg. Med. Chem. Lett.* 2001; **11**: 741-745.
 Hon Y. S.; *Tetrahedron* 2003; **59**: 493-498.

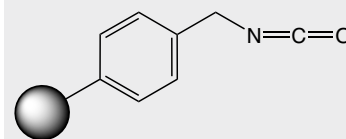
		Article No.	Quantity	Price	
Polystyrene-NCO		SR-1021			
Isocyanatomethyl polystyrene		SR-1021.0005	5 g	110,00	
LOADING	2.1-2.5 mmol/g	SR-1021.0025	25 g	375,00	
PARTICLE SIZE	100-200 mesh	SR-1021.0100	100 g	1100,00	
CROSSLINKING	1% DVB				

DESCRIPTION Isocyanate Resin, polystyrene resin functionalized with an isocyanate end group. This reagent has shown proficiency in the scavenging of primary and secondary amine containing compounds. Driving reactions to completion by the addition of excess amine is a common trick to improve the outcome of synthetic routes. Isocyanate resins have been utilized in scavenging excess amines from reductive aminations, as well as amide coupling reactions. This highly capable reagent is also efficient in removing other nucleophiles from reaction media. Thiols, alcohols and some anilines are effectively scavenged. The high reactivity of this material does have its limitations in that nucleophilic solvents pose compatibility issues.

Literature:

Rebek J.; *J. Am. Chem. Soc.* 1975; **97**: 4407-4408.
 Kaldor S. W.; *Tetrahedron Lett.* 1996; **37**: 7193-7196.
 Rosso V. W.; *Org. Process Res. & Dev.* 1997; **1**: 311-314.
 Creswell M. W.; *Tetrahedron* 1998; **29**: 1218-1219.
 Ishihara K.; *Chem. Lett.* 2000; **29**: 1218-1219.
 Ley S. J.; *Chem. Perkin Trans. 1*, 2000; 3645-3654.
 Nicolaou K. C. J.; *J. Am. Chem. Soc.* 2000; **122**: 9968-9976.
 Stevenson G.; *J. Biorg. Chem. Lett.* 2000; **10**: 2697-2699.
 Fritz J. E.; *J. Biorg. Chem. Lett.* 2001; **11**: 1643-1646.
 Kawahata N. H.; *Tetrahedron Lett.* 2002; **43**: 7221-7223.
 Chen C. Dagneau P.; *J. Org. Chem.* 2003; **68**: 2633-2668.
 Cho J. K.; *Chem. Comm.* 2004; 502-503.
 Meusel M.; *Tetrahedron Lett.* 2005; **46**: 2231-2233.
 Wipf P.; *Tetrahedron* 2005; **61**: 11488-11500.
 Lindquist C.; *Tetrahedron* 2006; **62**: 3439-3445.

		Article No.	Quantity	Price
Polystyrene-NCO		SR-1124		
Isocyanatomethyl polystyrene (rigid, macroporous)		SR-1124.0005	5 g	110,00
LOADING	0.5-1.1 mmol/g	SR-1124.0025	25 g	420,00
PARTICLE SIZE	200-400µm			

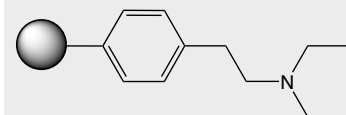


DESCRIPTION Isocyanate Resin, polystyrene resin functionalized with an isocyanate end group. This reagent has shown proficiency in the scavenging of primary and secondary amine containing compounds. Driving reactions to completion by the addition of excess amine is a common trick to improve the outcome of synthetic routes. Isocyanate resins have been utilized in scavenging excess amines from reductive aminations, as well as amide coupling reactions. This highly capable reagent is also efficient in removing other nucleophiles from reaction media. Thiols, alcohols and some anilines are effectively scavenged. The high reactivity of this material does have its limitations in that nucleophilic solvents pose compatibility issues.

Literature:

S. W. Kaldor *et al.*; *Tetrahedron Lett.* 1996; **37**: 7193.
 J. R. Booth *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4882.
 M. W. Creswell *et al.*; *Tetrahedron* 1998; **54**: 3983.
 D. L. Flynn *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4874.
 M. R. Lawrence *et al.*; *Synthesis* 1997; 553.
 M. J. Suto *et al.*; *Tetrahedron* 1998; **54**: 4141.
 Rebek J.; *J. Am. Chem. Soc.* 1975; **97**: 4407-4408.
 Kaldor S. W.; *Tetrahedron Lett.* 1996; **37**: 7193-7196.
 Rosso V. W.; *Org. Process Res & Dev.* 1997; **1**: 311-314.
 Creswell M. W.; *Tetrahedron* 1998; **29**: 1218-1219.
 Ishihara K.; *Chem. Lett.* 2000; **29**: 1218-1219.
 Ley S.; *J. Chem., Perkin Trans. 1*, 2000; 3645-3654.
 Nicolaou K. C. J.; *J. Am. Chem. Soc.* 2000; **122**: 9968-9976.
 Stevenson G.; *J. Biorg. Chem. Lett.* 2000; **10**: 2697-2699.
 Fritz J. E.; *J. Biorg. Chem. Lett.* 2001; **11**: 1643-1646.
 Kawahata N. H.; *Tetrahedron Lett.* 2002; **43**: 7221-7223.
 Chen C., Dagneau P.; *J. Org. Chem.* 2003, **68**: 2633-2668.
 Cho J. K.; *Chem. Comm.* 2004; 502-503.
 Meusel M.; *Tetrahedron Lett.* 2005; **46**: 2231-2233.
 Wipf P.; *Tetrahedron* 2005; **61**: 11488-11500.
 Lindquist C.; *Tetrahedron* 2006; **62**: 3439-3445.

		Article No.	Quantity	Price
Polystyrene-NEt₃		SR-1093		
Diethylaminoethyl polystyrene (rigid, macroporous)		SR-1093.0005	5 g	80,00
LOADING	0.5-1.5 mmol/g	SR-1093.0025	25 g	320,00
PARTICLE SIZE	200-400 µm			



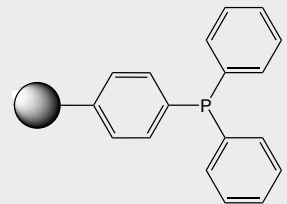
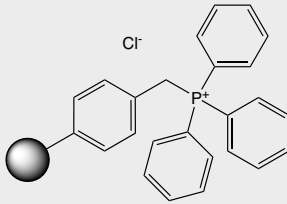
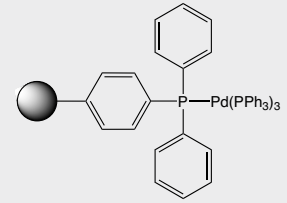
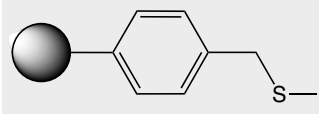
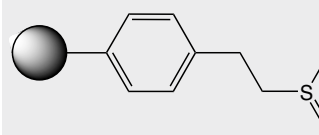
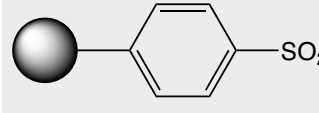
DESCRIPTION Triethylamine Resin, polystyrene resin functionalized with a trimethylamine end group. It is a polymer bound equivalent of trimethylamine and is capable of all reactions associated with its non-bound counterpart. It is commonly utilized as an acid scavenger useful for sequestering acidic residues as they are generated during reactions, allowing for one-pot synthesis of amides and sulfonamides from acyl/sulfonyl halides. Simple filtration provides the desired products, while acids and unreacted starting materials remain bound to the polymer. Use of excess Triethylamine Resin effectively liberates amines from their salts including salicylate, formate and acetate salts. The resin has been found very effective in removing both aliphatic and aromatic carboxylic acid impurities in bulk applications.

Literature:

S. W. Kaldor *et al.*; *Tetrahedron Lett.* 1996; **37**: 7193.
 J. R. Booth *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4882.
 M. W. Creswell *et al.*; *Tetrahedron* 1998; **54**: 3983.
 D. L. Flynn *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4874.
 M. R. Lawrence *et al.*; *Synthesis* 1997; 553.
 M. J. Suto *et al.*; *Tetrahedron* 1998; **54**: 4141.
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 Bhattacharyya S.; *Combi Chem & High Throughput Screen* 2000; **3**: 117-124.
 Hon Y. S.; *Tetrahedron* 2003; **59**: 493-498.

		Article No.	Quantity	Price	
Polystyrene-NEt₃Cl		SR-1131			
N,N,N-Triethyl-aminomethyl polystyrene chloride (rigid, macroporous)		SR-1131.0010	10 g	30,00	
LOADING	0.5-1 mmol/g	SR-1131.0100	100 g	110,00	
PARTICLE SIZE	200-400 µm				
DESCRIPTION	Literature: S. W. Kaldor <i>et al.</i> ; <i>Tetrahedron Lett.</i> 1996; 37 : 7193. J. R. Booth <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4882. M. W. Creswell <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 3983. D. L. Flynn <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4874. M. R. Lawrence <i>et al.</i> ; <i>Synthesis</i> 1997; 553. M. J. Suto <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 4141.				
Polystyrene-NH₂		SR-1132			
Aminomethyl polystyrene (rigid, macroporous)		SR-1132.0005	5 g	50,00	
LOADING	2-3.5 mmol/g	SR-1132.0025	25 g	180,00	
PARTICLE SIZE	200-400 µm				
DESCRIPTION	Literature: S. W. Kaldor <i>et al.</i> ; <i>Tetrahedron Lett.</i> 1996; 37 : 7193. J. R. Booth <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4882. M. W. Creswell <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 3983. D. L. Flynn <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4874. M. R. Lawrence <i>et al.</i> ; <i>Synthesis</i> 1997; 553. M. J. Suto <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 4141.				
Polystyrene-Pip		SR-1116			
Piperidinomethyl polystyrene		SR-1116.0025	25 g	125,00	
LOADING	2.0-3.0 mmol/g	SR-1116.0100	100 g	300,00	
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
Polystyrene-Pip		SR-1133			
Piperidinoethyl polystyrene (rigid, macroporous)		SR-1133.0005	5 g	80,00	
LOADING	0.5-1.2 mmol/g	SR-1133.0025	25 g	320,00	
PARTICLE SIZE	200-400 µm				
DESCRIPTION	Literature: S. W. Kaldor <i>et al.</i> ; <i>Tetrahedron Lett.</i> 1996; 37 : 7193. J. R. Booth <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4882. M. W. Creswell <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 3983. D. L. Flynn <i>et al.</i> ; <i>J. Am. Chem. Soc.</i> 1997; 119 : 4874. M. R. Lawrence <i>et al.</i> ; <i>Synthesis</i> 1997; 553. M. J. Suto <i>et al.</i> ; <i>Tetrahedron</i> 1998; 54 : 4141.				
Polystyrene-PPh₂		SR-1032			
Triphenylphosphine polystyrene		SR-1032.0005	5 g	60,00	
CAS-NO	39319-11-4	SR-1032.0025	25 g	210,00	
LOADING	0.8-1.6 mmol/g	SR-1032.0100	100 g	730,00	
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				

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	Article No.	Quantity	Price	
Polystyrene-PPh₂				SR-1125
Triphenylphosphine polystyrene	SR-1125.0005	5 g	60,00	
CAS-NO 39319-11-4	SR-1125.0025	25 g	210,00	
LOADING 1.0-1.5 mmol/g	SR-1125.0100	100 g	730,00	
PARTICLE SIZE 200-400 mesh				
CROSSLINKING 1% DVB				
Polystyrene-CH₂PPh₃ Cl				SR-1008
Triphenylmethylphosphonium polystyrene chloride	SR-1008.0005	5 g	200,00	
LOADING 0.7-1.3 mmol/g	SR-1008.0025	25 g	700,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-PPh₂-Pd(PPh₃)₃				SR-1134
Tris(triphenylphosphin)-palladium(0)-triphenylphosphine polystyrene	SR-1134.0001	1 g	60,00	
LOADING 0.1-0.15 mmol/g	SR-1134.0005	5 g	210,00	
PARTICLE SIZE 100-200 mesh				
CROSSLINKING 1% DVB				
Polystyrene-S-Me				SR-1110
S-(Methyl)thiomethyl polystyrene	SR-1110.0005	5 g	85,00	
LOADING 0.5-1.3 mmol/g	SR-1110.0025	25 g	275,00	
PARTICLE SIZE 100-200 mesh	SR-1110.0100	100 g	700,00	
CROSSLINKING 1% DVB				
DMSO Resin				SR-1112
S-Methyl-sulfoxyethyl polystyrene	SR-1112.0005	5 g	80,00	
PARTICLE SIZE 100-200 mesh	SR-1112.0025	25 g	275,00	
CROSSLINKING 1% DVB	SR-1112.0100	100 g	850,00	
Polystyrene-SO₂Cl				SR-1034
Sulfonylchloride polystyrene	SR-1034.0005	5 g	65,00	
LOADING 0.5-4.0 mmol/g	SR-1034.0025	25 g	250,00	
PARTICLE SIZE 100-200 mesh	SR-1034.0100	100 g	700,00	
CROSSLINKING 1% DVB				
SYNONYMS	p-Toluenesulfonyl chloride resin (1% DVB, 100-200 mesh, 0.5-4.0 mmol/g)			
DESCRIPTION	<p>Sulfonyl Chloride Resin, polystyrene resin functionalized with a p-tosyl chloride end group. It is an incredibly capable scavenger of basic compounds such as primary, secondary or tertiary amines. Other nucleophilic reagents such as alcohols and hydrazines are sequestered efficiently, as are some organometallics. It is particularly useful in a unique "catch and release" protocol in which alcohols are effectively tosylated, yet remain on the resin scaffold. These activated polymer intermediates are then purified by simple washing and are then 'released' with secondary amines, generating their tertiary counterparts.</p>		<p>Literature: Huang W.; <i>Reactive Polymers (Engl.)</i> 1992; 1: 61. Hunt J. A.; <i>J. Am. Chem. Soc.</i> 1996; 118: 9998. Zhong H. M.; <i>J. Org. Chem.</i> 1997; 62: 9326. Rueter J. K.; <i>Tetrahedron Lett.</i> 1998; 39: 975. Baxter E. W.; <i>Tetrahedron Lett.</i> 1998; 39: 979. Takahashi T.; <i>Tetrahedron Lett.</i> 1998; 39: 1369. Brummond K. M.; <i>Tetrahedron Lett.</i> 1999; 40: 2231. Yoshida Y.; <i>Synthesis</i> 1999; 9: 1633-1636. Zhang H.-C.; <i>Org Letters</i> 2000; 2: 89. Hansen H. C.; <i>Bioorg. Med Chem Lett</i> 2000; 10: 2435. Pirrung M. S.; <i>J. Comb. Chem.</i> 2000; 2: 675-680. Wu T. Y. H.; <i>Org. Lett.</i> 2001; 3: 3827-3830. Cheng W. C.; <i>Org. Lett.</i> 2002; 4: 741-744. MacCoss R. N.; <i>Org. Biomol. Chem.</i> 2003; 1: 2029-2031.</p>	

		Article No.	Quantity	Price	
Polystyrene-SO₃H		SR-1126			
Polystyrene sulfonic acid (rigid, macroporous)		SR-1126.0010	10 g	50,00	
LOADING	2-5 mmol/g	SR-1126.0100	100 g	270,00	
PARTICLE SIZE	200-400 µm				

DESCRIPTION Sulfonic Acid Resin, polystyrene resin functionalized with a p-toluenesulfonic acid end group. It is a strong cation-exchange resin and is capable of scavenging heterocyclic bases in addition to primary, secondary and tertiary amines. MP-TsOH can also be utilized in many acid catalyzed reactions such as acetal and ketal formation. It is an excellent choice for the 'catch and release' purification of amines resulting from a variety of reactions including reductive aminations. This resin is also quite effective in solid-phase extraction (SPE) of amine bases in sample preparation of bio-analytes such as blood, urine, etc.

Literature:
 S. W. Kaldor *et al.*; *Tetrahedron Lett.* 1996; **37**: 7193.
 J. R. Booth *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4882.
 M. W. Creswell *et al.*; *Tetrahedron* 1998; **54**: 3983.
 D. L. Flynn *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4874.
 M. R. Lawrence *et al.*; *Synthesis* 1997; 553.
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		Article No.	Quantity	Price	
Polystyrene-SO₃Na		SR-1127			
Polystyrene sulfonic acid Na form (rigid, macroporous)		SR-1127.0010	10 g	30,00	
LOADING	1-2 mmol/g	SR-1127.0100	100 g	110,00	
PARTICLE SIZE	200-400 µm				

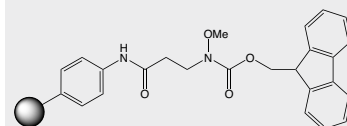
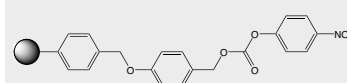
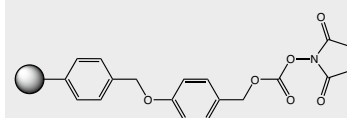
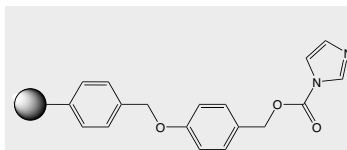
DESCRIPTION **Literature:**
 S. W. Kaldor *et al.*; *Tetrahedron Lett.* 1996; **37**: 7193.
 J. R. Booth *et al.*; *J. Am. Chem. Soc.* 1997; **119**: 4882.
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		Article No.	Quantity	Price	
Traceless Arene Resin		SR-1037			
N-Benzyl-aminomethyl polystyrene		SR-1037.0025	25 g	200,00	
LOADING	0.5-1.3 mmol/g	SR-1037.0100	100 g	600,00	
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				

DESCRIPTION **Literature:**
 Triazene-based resins for the traceless synthesis of arenes. S. Bräse, M. Lormann; *Angew. Chem.* 2000; **112**: 995-96; *Angew. Chem., Int. Ed.* 2000; **39**: 4165-4166.
 Solid-phase synthesis of substituted cinnolines by a Richter type cleavage protocol. Stefan Bräse, Stefan Dahmen and Jean Heuts; *Tetrahedron Letters* 1999; **40**: 6201-6203.

		Article No.	Quantity	Price	
Tri-Amine Resin		SR-1038			
[Bis(2-aminoethyl)aminoethyl]aminomethyl polystyrene		SR-1038.0025	25 g	190,00	
LOADING	0.6-1.0 mmol/g	SR-1038.0100	100 g	550,00	
PARTICLE SIZE	100-200 mesh				
CROSSLINKING	1% DVB				
SYNONYMS	Tris(2-aminoethyl)amine Resin				

	Article No.	Quantity	Price
Wang-OC-Imidazole SR-1023			
Imidazolyl carbonate benzyloxymethyl polystyrene	SR-1023.0005	5 g	130,00
LOADING 0.7-1.5 mmol/g	SR-1023.0025	25 g	400,00
PARTICLE SIZE 100-200 mesh	SR-1023.0100	100 g	1100,00
CROSSLINKING 1%DVB			
Wang-OCO-Su SR-1025			
Succinimidyl carbonate benzyloxymethyl polystyrene	SR-1025.0005	5 g	175,00
LOADING 0.7-2.0 mmol/g	SR-1025.0025	25 g	700,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1% DVB			
Wang-pNPC SR-1024			
4-Nitrophenyl carbonate benzyloxymethyl polystyrene	SR-1024.0005	5 g	250,00
LOADING 0.3-1.5 mmol/g	SR-1024.0025	25 g	950,00
PARTICLE SIZE 100-200 mesh			
CROSSLINKING 1%DVB			
Weinreb Amide Resin SR-1039			
3-(N-Fmoc-N-methoxy)propyl-amidomethyl polystyrene	SR-1039.0005	5 g	175,00
LOADING 0.5-1.3 mmol/g	SR-1039.0025	25 g	600,00
PARTICLE SIZE 100-200 mesh	SR-1039.0100	100 g	1750,00
CROSSLINKING 1% DVB			



10. Abbreviations

BrAA:	Bromoacetic acid
°C:	degree Celsius
COMU:	1-[1-(Cyano-2-ethoxy-2-oxoethylideneaminoxy)-dimethylamino-morpholino]-uronium hexafluorophosphate
DBU:	1,8-Diazabicyclo[5.4.0]undec-7-ene
Dde:	N-[1-(4,4-dimethyl-2,6-dioxocyclohex-1-ylidene)ethyl]
DIAD:	Diisopropylazodicarboxylate
DIC:	Diisopropylcarbodiimide
DIEA:	Diisopropylethylamine
DMAP:	4-Dimethylaminopyridine
DMF:	Dimethylformamide
DPPA:	Diphenylphosphoric acid azide
DVB:	Divinylbenzene
Fmoc:	Fluorenylmethoxycarbonyl
h:	hour
HATU:	1-[Bis(dimethylamino)methylene]-1H-1,2,3-triazolo[4,5-b]pyridinium 3-oxid hexafluorophosphate
HFIP:	Hexafluoroisopropanol
HOAt:	1-Hydroxy-7-azabenzotriazol
MBHA:	4-Methylbenzhydramine
min:	minute
mL:	milliliter
NMP:	N-Methyl Pyrrolidon
NMR:	nuclear magnetic resonance
Ns:	o-nitrobenzenesulfonamide
NsCl:	o-nitrobenzenesulfonylchloride
Ph:	Phenyl
RT:	room temperature
SPPS:	solid phase peptide synthesis
TBTU:	O-(1-H-Benzotriazol-1-yl)-N,N,N',N'-tetramethyluroniumtetra-fluoroborat
TFA:	Trifluoroacetic acid
THF:	Tetrahydrofuran
TIPS:	Triisopropylsilane

11. Literature

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12. Index

12.1. Code Index

CODE	NAME	PAGE	CODE	NAME	PAGE
BR-1000a	Polystyrene-Me-NH2	63	BR-1365	Fmoc-Rink-Amide PEG AM Resin	51
BR-1000b	Polystyrene-Me-NH2	63	BR-1366	Fmoc-Rink-Amide PEG MBHA Resin	51
BR-1000c	Polystyrene-Me-NH2	63	BR-1400	Fmoc-NH-PEG AM Resin	66
BR-1005a	Polystyrene-Me-NH2	63	BR-1405	Fmoc-NH-PEG AM Resin	66
BR-1005b	Polystyrene-Me-NH2	63	BR-1406	Fmoc-NH-PEG MBHA Resin	66
BR-1005c	Polystyrene-Me-NH2	64	BR-1410	Polystyrene-Me-NH2	137
BR-1010	4-MeO-BH-NH2 Resin	38	BR-1420	Wang Resin	46
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BR-1030	4-MeO-BH-Br Resin	38	BR-2005	Fmoc-Sieber-TG resin	54
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BR-1215	4-Me-Benzophenon Resin	39	BR-5113	Polystyrene-Et-OH	57
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BR-1360	Fmoc-Rink-Amide PEG AM Resin	51	BR-5210	PAM Resin	41
			BR-5212	Polystyrene-Br	69
			BR-5213	Polystyrene-COOH	55
			BR-5214	Polystyrene-Me-OH	57
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BR-5219	Fmoc-NH-O-2CT Resin	68	BRH1030	HypoGel®400 NH2	64
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BR-5222	2-Cl-BH-OH Resin	38	BRH1050	HypoGel® 200 Bromo Acetal	70
BR-5224	2-Diol Resin	58	BRH1060	HypoGel® 200 CHO	61
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BR-5252	Polystyrene-AE-COOH	55	BRH1220	HypoGel® 400 HMBA	48
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BR-5254	Polystyrene-AM-CHO	60	BRH1240	HypoGel® 400 REM	73
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BR-5275	Polystyrene-Me-SH	71	HL12018	TG HL REM (75µm)	73
BR-5276	Polystyrene-O-Ph-CHO	60	HL12019	TG HL Bromo Acetal (110µm)	70
BR-5277	Polystyrene-O-Ph-CHO	60	HL12023	TG HL RAM (75µm)	53
BR-9011	TTDS-Mmt-Resin	67	HL12132	TG HL NH2 (110µm)	66
BR-9012	TTDS-Mmt-Resin	67	HL12133	TG HL COOH (110µm)	56
BR-9013	Fmoc-TTDS-Trt Resin	67	HL12134	TG HL SH (110µm)	72
BR-9014	Fmoc-TTDS-BH Resin	67	HL12136	TG HL CHO (110µm)	62
BRH1000	HypoGel®200 COOH	55	HL12902	TG HL NH2 (75µm)	65

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HL12904	TG HL SH (75µm)	72	RAA1050	H-L-Cys(Clt)-2CT Resin	81
HL12906	TG HL CHO (75µm)	61	RAA1055	H-L-Cys(Mmt)-2CT Resin	81
LS-3600	(DOTA-Lys(DOTA))2-Lys-Gly-Gly-Gly-N2H3*TFA	31	RAA1060	H-D-Cys(Trt)-2CT Resin	82
LS-3610	(Lys)2-Lys-Gly-Gly-Gly-N2H3*5TFA	30	RAA1065	H-L-Cys(Trt)-2CT Resin	82
LS-3620	(Lys)2-Lys-N2H3*5TFA	30	RAA1066	H-L-Cys(Trt)-2CT Resin	82
LS-3630	(Lys)2-Lys-beta-Ala-beta-Ala-N2H3*5TFA	30	RAA1074	H-D-Glu(tBu)-2CT Resin	83
LS-3640	(Ser-Lys(Ser))2-Lys-Gly-Gly-Gly-N2H3*5TFA	31	RAA1075	H-L-Glu(tBu)-2CT Resin	83
LS-3650	(TPP-Lys(TPP))2-Lys-Gly-Gly-Gly-N2H3*4Br*TFA	31	RAA1076	H-L-Glu(tBu)-2CT Resin	83
PAM5795	Trt-S-Ac-L-Leu-PAM Resin	75	RAA1077	Fmoc-L-Gln(Rink-Resin)-OAll	75
PYV1000	Fmoc-NHN=Pyv Resin	110	RAA1078	H-L-Glu(2CT Resin)-OAll	83
PYV1100	Fmoc-L-Ala-NHN=Pyv Resin	110	RAA1085	H-L-Gln-2CT Resin	84
PYV1110	Fmoc-L-Arg(Pbf)-NHN=Pyv Resin	110	RAA1086	H-L-Gln-2CT Resin	84
PYV1120	Fmoc-L-Asn(Trt)-NHN=Pyv Resin	110	RAA1087	H-L-Gln(Trt)-2CT Resin	84
PYV1130	Fmoc-L-Asp(tBu)-NHN=Pyv Resin	110	RAA1088	H-L-Gln(Trt)-2CT Resin	84
PYV1140	Fmoc-L-Cys(Trt)-NHN=Pyv Resin	110	RAA1093	H-L-His(Clt)-2CT Resin	84
PYV1150	Fmoc-L-Glu(tBu)-NHN=Pyv Resin	111	RAA1095	H-L-His(Mmt)-2CT Resin	85
PYV1160	Fmoc-L-Gln(Trt)-NHN=Pyv Resin	111	RAA1097	H-L-His(Mtt)-2CT Resin	85
PYV1170	Fmoc-Gly-NHN=Pyv Resin	111	RAA1100	H-D-His(Trt)-2CT Resin	85
PYV1180	Fmoc-L-His(Trt)-NHN=Pyv Resin	111	RAA1105	H-L-His(Trt)-2CT Resin	85
PYV1190	Fmoc-L-Ile-NHN=Pyv Resin	111	RAA1106	H-L-His(Trt)-2CT Resin	85
PYV1200	Fmoc-L-Leu-NHN=Pyv Resin	111	RAA1115	H-L-Hse(Me)-2CT Resin	85
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PYV1220	Fmoc-L-Met-NHN=Pyv Resin	111	RAA1125	H-L-Hse(Trt)-2CT Resin	86
PYV1230	Fmoc-L-Phe-NHN=Pyv Resin	112	RAA1126	H-L-Hse(Trt)-2CT Resin	86
PYV1240	Fmoc-L-Pro-NHN=Pyv Resin	112	RAA1134	H-D-allo-Ile-2CT Resin	86
PYV1250	Fmoc-L-Ser(tBu)-NHN=Pyv Resin	112	RAA1135	H-L-Ile-2CT Resin	86
PYV1260	Fmoc-L-Thr(tBu)-NHN=Pyv Resin	112	RAA1136	H-L-Ile-2CT Resin	86
PYV1270	Fmoc-L-Trp(Boc)-NHN=Pyv Resin	112	RAA1144	H-D-Leu-2CT Resin	87
PYV1280	Fmoc-L-Tyr(tBu)-NHN=Pyv Resin	112	RAA1145	H-L-Leu-2CT Resin	86
PYV1290	Fmoc-L-Val-NHN=Pyv Resin	112	RAA1146	H-L-Leu-2CT Resin	87
R28013	TG R Wang (90µm)	47	RAA1154	H-D-Lys(Boc)-2CT Resin	87
R28014	TG R HMBA (90µm)	49	RAA1155	H-L-Lys(Boc)-2CT Resin	87
R28023	TG R RAM (90µm)	52	RAA1156	H-L-Lys(Boc)-2CT Resin	87
R28902	TG R NH2 (90µm)	65	RAA1160	H-D-Lys(Mtt)-2CT Resin	87
RAA1004	H-D-Ala-2CT Resin	79	RAA1165	H-L-Lys(Mtt)-2CT Resin	87
RAA1005	H-L-Ala-2CT Resin	79	RAA1167	H-L-Lys(Trt)-2CT Resin	87
RAA1006	H-L-Ala-2CT Resin	79	RAA1168	H-L-Lys(Trt)-2CT Resin	88
RAA1010	3-Aminobenzoic acid-2CT Resin	79	RAA1170	H-D-Met-2CT Resin	89
RAA1015	4-Aminobenzoic acid-2CT Resin	79	RAA1175	H-L-Met-2CT Resin	88
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RAA1029	H-D-Arg(Pbf)-2CT Resin	80	RAA1185	H-L-Orn(Boc)-2CT Resin	89
RAA1030	H-L-Arg(Pbf)-2CT Resin	79	RAA1186	H-L-Orn(Boc)-2CT Resin	89
RAA1031	H-L-Arg(Pbf)-2CT Resin	80	RAA1195	H-L-Orn(Mtt)-2CT Resin	89
RAA1040	H-Gly-2CT Resin	84	RAA1200	H-D-Phe-2CT Resin	90
RAA1041	H-Gly-2CT Resin	84	RAA1205	H-L-Phe-2CT Resin	89
RAA1043	H-D-Asn-2CT Resin	80	RAA1206	H-L-Phe-2CT Resin	90
RAA1044	H-L-Asn-2CT Resin	80	RAA1210	H-Inp-2CT Resin	86
RAA1045	H-L-Asn(Trt)-2CT Resin	80	RAA1220	H-L-Pro-2CT Resin	90
RAA1046	H-L-Asn(Trt)-2CT Resin	80	RAA1221	H-L-Pro-2CT Resin	90
RAA1047	H-L-Asp(tBu)-2CT Resin	80	RAA1229	H-D-Ser(tBu)-2CT Resin	91
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RAA1235	H-D-Ser(Trt)-2CT Resin	91	RL-2260	SCAL-Linker	78
RAA1240	H-L-Ser(Trt)-2CT Resin	91	S-30011	TG S AC (90µm)	49
RAA1241	H-L-Ser(Trt)-2CT Resin	91	S-30012	TG S Trt-OH (90µm)	42
RAA1249	H-D-Thr(tBu)-2CT Resin	92	S-30013	TG S Wang (90µm)	47
RAA1250	H-L-Thr(tBu)-2CT Resin	92	S-30014	TG S HMBA (90µm)	49
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RAA1261	H-L-Thr(Trt)-2CT Resin	92	S-30132	TG S NH2 (130µm)	65
RAA1265	H-D-Trp-2-CT Resin	94	S-30133	TG S COOH (130µm)	56
RAA1270	H-L-Trp-2CT Resin	94	S301340	TG S SH (130µm)	72
RAA1271	H-L-Trp-2CT Resin	94	S-30135	TG S CO-NHS (130µm)	56
RAA1280	H-L-Tyr(tBu)-2CT Resin	94	S-30136	TG S CHO (130µm)	61
RAA1281	H-L-Tyr(tBu)-2CT Resin	95	S-30137	TG S NH-NH-Boc (130µm)	68
RAA1282	H-D-Tyr(tBu)-2CT Resin	95	S-30900	TG S OH (90µm)	58
RAA1290	H-L-Tyr(Clt)-2CT Resin	94	S-30901	TG S Br (90µm)	69
RAA1292	H-L-Tyr(Me)-2CT Resin	94	S-30902	TG S NH2 (90µm)	65
RAA1299	H-D-Val-2CT Resin	95	S-30903	TG S COOH (90µm)	56
RAA1300	H-L-Val-2CT Resin	95	S309040	TG S SH (90µm)	71
RAA1301	H-L-Val-2CT Resin	95	S-30905	TG S CO-NHS (90µm)	56
RAA1305	H-L-Trp(Boc)-2CT Resin	93	S-30906	TG S CHO (90µm)	61
RAA1306	H-L-Trp(Boc)-2CT Resin	94	S-30907	TG S NH-NH-Boc (90µm)	68
RAA1320	H-L-Lys(2CT-Resin)-OAll	88	SAD1101	Fmoc-D-Ala-AC TG	103
RAA1325	Fmoc-L-Lys(2CT-Resin)-OAll	88	SAD1102	Fmoc-D-Arg(Pbf)-AC TG	103
RAA1330	H-L-Dap(Boc)-2CT Resin	82	SAD1103	Fmoc-D-Arg(Pmc)-AC TG	103
RAA1331	H-L-Dap(Boc)-2CT Resin	82	SAD1104	Fmoc-D-Asn(Trt)-AC TG	104
RAA2001	Fmoc-D-Ala-Wang Resin	119	SAD1105	Fmoc-D-Asp(tBu)-AC TG	104
RAA2610	Fmoc-L-Asp(2CT resin)-NH2	81	SAD1106	Fmoc-D-Cys(Trt)-AC TG	105
RAA2620	Fmoc-L-Cys(Mmt resin)-NH2	82	SAD1107	Fmoc-D-Cys(Acm)-AC TG	104
RAA2630	Fmoc-L-Glu(2CT resin)-NH2	83	SAD1108	Fmoc-D-Cys(S-tBu)-AC TG	105
RAA2640	Fmoc-L-His(Mmt resin)-NH2	85	SAD1109	Fmoc-D-Cys(SS-tBu)-AC TG	105
RAA2660	Fmoc-L-Lys(Mmt resin)-O-Trt	88	SAD1110	Fmoc-D-Gln(Trt)-AC TG	106
RAA2670	Fmoc-L-Ser(2CT resin)-NH2	91	SAD1112	Fmoc-D-Glu(tBu)-AC TG	105
RAA2680	Fmoc-L-Thr(MeO-BH resin)-NH2	93	SAD1114	Fmoc-D-His(Trt)-AC TG	106
RAA2690	Fmoc-L-Tyr(2CT resin)-NH2	95	SAD1115	Fmoc-D-Ile-AC TG	106
RAA2700	H-L-Glu(2CT resin)-OtBu	83	SAD1116	Fmoc-D-Leu-AC TG	107
RAA3280	Fmoc-L-Threonino(Mmt resin)-OTrt	93	SAD1117	Fmoc-D-Lys(Boc)-AC TG	107
RAA4000	H-L-Mim-2CT Resin	89	SAD1118	Fmoc-D-Met-AC TG	107
RAA5962	H-L-Pip-2CT Resin	90	SAD1119	Fmoc-D-Nle-AC TG	107
RAA5977	H-L-Tic-2CT Resin	93	SAD1120	Fmoc-D-Orn(Boc)-AC TG	108
RAA6220	Fmoc-L-Nle-2CT Resin	89	SAD1121	Fmoc-D-Phe-AC TG	108
RAA6225	H-D-Pro-2CT Resin	90	SAD1122	Fmoc-D-Pro-AC TG	108
RAA6230	Fmoc-L-Tyr(2CT resin)-OAll	95	SAD1123	Fmoc-D-Ser(tBu)-AC TG	108
RAL1114	H-L-Thr(tBu)-ol-2CT Resin	93	SAD1124	Fmoc-D-Thr(tBu)-AC TG	109
RAL1115	H-L-Thr(tBu)-ol-2CT Resin	93	SAD1126	Fmoc-D-Tyr(tBu)-AC TG	109
RAL1126	Fmoc-L-Thr(tBu)-ol-2CT Resin	93	SAD1127	Fmoc-D-Val-AC TG	109
RAL1155	Fmoc-NH-O-2CT Resin	68	SAD1128	Fmoc-D-Trp(Boc)-AC TG	109
RDA1020	1,2-Diaminoethane-trityl resin	82	SAD1201	Fmoc-D-Ala-Trt TG	96
RDA1065	Piperazine-trityl resin	90	SAD1202	Fmoc-D-Arg(Pbf)-Trt TG	96

CODE	NAME	PAGE	CODE	NAME	PAGE
SAD1203	Fmoc-D-Arg(Pmc)-Trt TG	96	SAL1105	Fmoc-L-Asp(tBu)-AC TG	104
SAD1204	Fmoc-D-Asn(Trt)-Trt TG	97	SAL1106	Fmoc-L-Cys(Trt)-AC TG	105
SAD1205	Fmoc-D-Asp(tBu)-Trt TG	97	SAL1107	Fmoc-L-Cys(Acm)-AC TG	104
SAD1206	Fmoc-D-Cys(Trt)-Trt TG	98	SAL1108	Fmoc-L-Cys(S-tBu)-AC TG	105
SAD1207	Fmoc-D-Cys(Acm)-Trt TG	97	SAL1109	Fmoc-L-Cys(SS-tBu)-AC TG	104
SAD1208	Fmoc-D-Cys(S-tBu)-Trt TG	98	SAL1110	Fmoc-L-Gln(Trt)-AC TG	106
SAD1209	Fmoc-D-Cys(SS-tBu)-Trt TG	98	SAL1112	Fmoc-L-Glu(tBu)-AC TG	105
SAD1210	Fmoc-D-Gln(Trt)-Trt TG	99	SAL1113	Fmoc-Gly-AC TG	106
SAD1212	Fmoc-D-Glu(tBu)-Trt TG	98	SAL1114	Fmoc-L-His(Trt)-AC TG	106
SAD1214	Fmoc-D-His(Trt)-Trt TG	99	SAL1115	Fmoc-L-Ile-AC TG	106
SAD1215	Fmoc-D-Ile-Trt TG	99	SAL1116	Fmoc-L-Leu-AC TG	106
SAD1216	Fmoc-D-Leu-Trt TG	100	SAL1117	Fmoc-L-Lys(Boc)-AC TG	107
SAD1217	Fmoc-D-Lys(Boc)-Trt TG	100	SAL1118	Fmoc-L-Met-AC TG	107
SAD1218	Fmoc-D-Met-Trt TG	100	SAL1119	Fmoc-L-Nle-AC TG	107
SAD1219	Fmoc-D-Nle-Trt TG	100	SAL1120	Fmoc-L-Orn(Boc)-AC TG	107
SAD1220	Fmoc-D-Orn(Boc)-Trt TG	101	SAL1121	Fmoc-L-Phe-AC TG	108
SAD1221	Fmoc-D-Phe-Trt TG	101	SAL1122	Fmoc-L-Pro-AC TG	108
SAD1222	Fmoc-D-Pro-Trt TG	101	SAL1123	Fmoc-L-Ser(tBu)-AC TG	108
SAD1223	Fmoc-D-Ser(tBu)-Trt TG	101	SAL1124	Fmoc-L-Thr(tBu)-AC TG	108
SAD1224	Fmoc-D-Thr(tBu)-Trt TG	102	SAL1126	Fmoc-L-Tyr(tBu)-AC TG	109
SAD1226	Fmoc-D-Tyr(tBu)-Trt TG	102	SAL1127	Fmoc-L-Val-AC TG	109
SAD1227	Fmoc-D-Val-Trt TG	102	SAL1128	Fmoc-L-Trp(Boc)-AC TG	109
SAD1228	Fmoc-D-Trp(Boc)-Trt TG	102	SAL1201	Fmoc-L-Ala-Trt TG	96
SAD1301	Fmoc-D-Ala-Wang TG	130	SAL1202	Fmoc-L-Arg(Pbf)-Trt TG	96
SAD1302	Fmoc-D-Arg(Pbf)-Wang TG	130	SAL1203	Fmoc-L-Arg(Pmc)-Trt TG	96
SAD1303	Fmoc-D-Arg(Pmc)-Wang TG	130	SAL1204	Fmoc-L-Asn(Trt)-Trt TG	97
SAD1304	Fmoc-D-Asn(Trt)-Wang TG	131	SAL1205	Fmoc-L-Asp(tBu)-Trt TG	97
SAD1305	Fmoc-D-Asp(tBu)-Wang TG	131	SAL1206	Fmoc-L-Cys(Trt)-Trt TG	98
SAD1306	Fmoc-D-Cys(Trt)-Wang TG	132	SAL1207	Fmoc-L-Cys(Acm)-Trt TG	97
SAD1307	Fmoc-D-Cys(Acm)-Wang TG	131	SAL1208	Fmoc-L-Cys(S-tBu)-Trt TG	98
SAD1308	Fmoc-D-Cys(S-tBu)-Wang TG	132	SAL1209	Fmoc-L-Cys(SS-tBu)-Trt TG	97
SAD1309	Fmoc-D-Cys(SS-tBu)-Wang TG	132	SAL1210	Fmoc-L-Gln(Trt)-Trt TG	99
SAD1310	Fmoc-D-Gln(Trt)-Wang TG	132	SAL1212	Fmoc-L-Glu(tBu)-Trt TG	98
SAD1312	Fmoc-D-Glu(tBu)-Wang TG	133	SAL1213	Fmoc-Gly-Trt TG	99
SAD1314	Fmoc-D-His(Trt)-Wang TG	133	SAL1214	Fmoc-L-His(Trt)-Trt TG	99
SAD1315	Fmoc-D-Ile-Wang TG	133	SAL1215	Fmoc-L-Ile-Trt TG	99
SAD1316	Fmoc-D-Leu-Wang TG	134	SAL1216	Fmoc-L-Leu-Trt TG	99
SAD1317	Fmoc-D-Lys(Boc)-Wang TG	134	SAL1217	Fmoc-L-Lys(Boc)-Trt TG	100
SAD1318	Fmoc-D-Met-Wang TG	134	SAL1218	Fmoc-L-Met-Trt TG	100
SAD1319	Fmoc-D-Nle-Wang TG	134	SAL1219	Fmoc-L-Nle-Trt TG	100
SAD1320	Fmoc-D-Orn(Boc)-Wang TG	135	SAL1220	Fmoc-L-Orn(Boc)-Trt TG	100
SAD1321	Fmoc-D-Phe-Wang TG	135	SAL1221	Fmoc-L-Phe-Trt TG	101
SAD1322	Fmoc-D-Pro-Wang TG	135	SAL1222	Fmoc-L-Pro-Trt TG	101
SAD1323	Fmoc-D-Ser(tBu)-Wang TG	135	SAL1223	Fmoc-L-Ser(tBu)-Trt TG	101
SAD1324	Fmoc-D-Thr(tBu)-Wang TG	136	SAL1224	Fmoc-L-Thr(tBu)-Trt TG	101
SAD1326	Fmoc-D-Tyr(tBu)-Wang TG	136	SAL1226	Fmoc-L-Tyr(tBu)-Trt TG	102
SAD1327	Fmoc-D-Val-Wang TG	136	SAL1227	Fmoc-L-Val-Trt TG	102
SAD1328	Fmoc-D-Trp(Boc)-Wang TG	136	SAL1228	Fmoc-L-Trp(Boc)-Trt TG	102
SAL1101	Fmoc-L-Ala-AC TG	103	SAL1301	Fmoc-L-Ala-Wang TG	130
SAL1102	Fmoc-L-Arg(Pbf)-AC TG	103	SAL1302	Fmoc-L-Arg(Pbf)-Wang TG	130
SAL1103	Fmoc-L-Arg(Pmc)-AC TG	103	SAL1303	Fmoc-L-Arg(Pmc)-Wang TG	130
SAL1104	Fmoc-L-Asn(Trt)-AC TG	104	SAL1304	Fmoc-L-Asn(Trt)-Wang TG	131

Prices are in EUR, net, exw Germany

CODE	NAME	PAGE	CODE	NAME	PAGE
SAL1305	Fmoc-L-Asp(tBu)-Wang TG	131	SEA2006	Fmoc-L-Gln(Trt)-SEA-PS resin	115
SAL1306	Fmoc-L-Cys(Trt)-Wang TG	132	SEA2007	Fmoc-L-Glu(tBu)-SEA-PS resin	114
SAL1307	Fmoc-L-Cys(Acm)-Wang TG	131	SEA2008	Fmoc-Gly-SEA-PS resin	115
SAL1308	Fmoc-L-Cys(S-tBu)-Wang TG	132	SEA2009	Fmoc-L-His(Trt)-SEA-PS resin	115
SAL1309	Fmoc-L-Cys(SS-tBu)-Wang TG	131	SEA2010	Fmoc-L-Ile-SEA-PS resin	115
SAL1310	Fmoc-L-Gln(Trt)-Wang TG	132	SEA2011	Fmoc-L-Leu-SEA-PS resin	116
SAL1312	Fmoc-L-Glu(tBu)-Wang TG	132	SEA2012	Fmoc-L-Lys(Boc)-SEA-PS resin	116
SAL1313	Fmoc-Gly-Wang TG	133	SEA2013	Fmoc-L-Met-SEA-PS resin	116
SAL1314	Fmoc-L-His(Trt)-Wang TG	133	SEA2014	Fmoc-L-Phe-SEA-PS resin	116
SAL1315	Fmoc-L-Ile-Wang TG	133	SEA2015	Fmoc-L-Pro-SEA-PS resin	117
SAL1316	Fmoc-L-Leu-Wang TG	133	SEA2016	Fmoc-L-Ser(tBu)-SEA-PS resin	117
SAL1317	Fmoc-L-Lys(Boc)-Wang TG	134	SEA2017	Fmoc-L-Thr(tBu)-SEA-PS resin	117
SAL1318	Fmoc-L-Met-Wang TG	134	SEA2018	Fmoc-L-Trp(Boc)-SEA-PS resin	117
SAL1319	Fmoc-L-Nle-Wang TG	134	SEA2019	Fmoc-L-Tyr(tBu)-SEA-PS resin	118
SAL1320	Fmoc-L-Orn(Boc)-Wang TG	135	SEA2020	Fmoc-L-Val-SEA-PS resin	118
SAL1321	Fmoc-L-Phe-Wang TG	135	SR-1004	Polystyrene-Ac	139
SAL1322	Fmoc-L-Pro-Wang TG	135	SR-1008	Polystyrene-CH2PPh3 Cl	144
SAL1323	Fmoc-L-Ser(tBu)-Wang TG	135	SR-1012	Polystyrene-DIC	139
SAL1324	Fmoc-L-Thr(tBu)-Wang TG	136	SR-1014	Polystyrene-EDC	139
SAL1326	Fmoc-L-Tyr(tBu)-Wang TG	136	SR-1021	Polystyrene-NCO	141
SAL1327	Fmoc-L-Val-Wang TG	136	SR-1023	Wang-OC-Imidazole	146
SAL1328	Fmoc-L-Trp(Boc)-Wang TG	136	SR-1024	Wang-pNPC	146
SAL2000	Fmoc-L-Lys(Fmoc)-Wang TG	134	SR-1025	Wang-OCO-Su	146
SAL2013	(Fmoc)4-Lys2-Lys-beta-Ala-Wang TG	76	SR-1032	Polystyrene-PPh2	143
SAL2023	(Fmoc)4-Lys2-Lys-Rink TG	76	SR-1034	Polystyrene-SO2Cl	144
SEA1000	SEA-PS resin	113	SR-1036	REM Resin	73
SEA1001	Fmoc-L-Ala-SEA-PS resin	113	SR-1037	Traceless Arene Resin	145
SEA1002	Fmoc-L-Arg(Pbf)-SEA-PS resin	113	SR-1038	Tri-Amine Resin	145
SEA1003	Fmoc-L-Asn(Trt)-SEA-PS resin	113	SR-1039	Weinreb Amide Resin	146
SEA1004	Fmoc-L-Asp(tBu)-SEA-PS resin	114	SR-1073	Polystyrene-Et-SO2Cl	139
SEA1005	Fmoc-L-Cys(S-tBu)-SEA-PS resin	114	SR-1093	Polystyrene-NET2	142
SEA1006	Fmoc-L-Gln(Trt)-SEA-PS resin	114	SR-1108	Polystyrene-Ac	139
SEA1007	Fmoc-L-Glu(tBu)-SEA-PS resin	114	SR-1109	Polystyrene-Morpholine	140
SEA1008	Fmoc-Gly-SEA-PS resin	115	SR-1110	Polystyrene-S-Me	144
SEA1009	Fmoc-L-His(Trt)-SEA-PS resin	115	SR-1111	Polystyrene-3-CHO	138
SEA1010	Fmoc-L-Ile-SEA-PS resin	115	SR-1112	DMSO Resin	144
SEA1011	Fmoc-L-Leu-SEA-PS resin	115	SR-1113	Et-NH-2CT Resin	138
SEA1012	Fmoc-L-Lys(Boc)-SEA-PS resin	116	SR-1114	Polystyrene-Guanidine	140
SEA1013	Fmoc-L-Met-SEA-PS resin	116	SR-1116	Polystyrene-Pip	143
SEA1014	Fmoc-L-Phe-SEA-PS resin	116	SR-1118	REM Resin	73
SEA1015	Fmoc-L-Pro-SEA-PS resin	116	SR-1119	Polystyrene-Et-SO2Cl	139
SEA1016	Fmoc-L-Ser(tBu)-SEA-PS resin	117	SR-1120	Polystyrene-Et-SO3H	140
SEA1017	Fmoc-L-Thr(tBu)-SEA-PS resin	117	SR-1121	Polystyrene-Et-SO3H	140
SEA1018	Fmoc-L-Trp(Boc)-SEA-PS resin	117	SR-1122	Polystyrene-Et-SO3H	140
SEA1019	Fmoc-L-Tyr(tBu)-SEA-PS resin	117	SR-1123	Polystyrene-Morpholine	141
SEA1020	Fmoc-L-Val-SEA-PS resin	118	SR-1124	Polystyrene-NCO	142
SEA2000	SEA-PS resin	113	SR-1125	Polystyrene-PPh2	144
SEA2001	Fmoc-L-Ala-SEA-PS resin	113	SR-1126	Polystyrene-SO3H	145
SEA2002	Fmoc-L-Arg(Pbf)-SEA-PS resin	113	SR-1127	Polystyrene-SO3Na	145
SEA2003	Fmoc-L-Asn(Trt)-SEA-PS resin	114	SR-1129	Polystyrene-4-CHO	139
SEA2004	Fmoc-L-Asp(tBu)-SEA-PS resin	114	SR-1130	Polystyrene-COOH	137
SEA2005	Fmoc-L-Cys(S-tBu)-SEA-PS resin	114	SR-1131	Polystyrene-NET3Cl	143

CODE	NAME	PAGE	CODE	NAME	PAGE
SR-1132	Polystyrene-NH2	143	WAA41318	Fmoc-L-Met-Wang Resin	126
SR-1133	Polystyrene-Pip	143	WAA41319	Fmoc-L-Nle-Wang Resin	126
SR-1134	Polystyrene-PPh2-Pd(PPh3)3	144	WAA41320	Fmoc-L-Orn(Boc)-Wang Resin	127
TR-1000	Polystyrene-AM-AC-HMPA	74	WAA41321	Fmoc-L-Phe-Wang Resin	127
TR-1200	TentaGel-AC-HMPA	74	WAA41322	Fmoc-L-Pro-Wang Resin	127
TR-2000	Polystyrene-AM-(AC-HMPA)-RAM	74	WAA41323	Fmoc-L-Ser(tBu)-Wang Resin	128
TR-2100	TentaGel-AM-(AC-HMPA)-RAM	74	WAA41324	Fmoc-L-Thr(tBu)-Wang Resin	128
WAA11301	Fmoc-L-Ala-Wang Resin	119	WAA41326	Fmoc-L-Tyr(tBu)-Wang Resin	129
WAA11302	Fmoc-L-Arg(Pbf)-Wang Resin	120	WAA41327	Fmoc-L-Val-Wang Resin	129
WAA11303	Fmoc-L-Arg(Pmc)-Wang Resin	120	WAA41328	Fmoc-L-Trp(Boc)-Wang Resin	129
WAA11304	Fmoc-L-Asn(Trt)-Wang Resin	120	WAA5101	Fmoc-beta-Ala-Wang Resin	119
WAA11305	Fmoc-L-Asp(tBu)-Wang Resin	121	WAA5129	Fmoc-Ahx Wang Resin	119
WAA11306	Fmoc-L-Cys(Trt)-Wang Resin	122	WAA5132	Fmoc-Sar-Wang Resin	124
WAA11307	Fmoc-L-Cys(Acm)-Wang Resin	121	WAA5139	Fmoc-Aib-Wang Resin	119
WAA11308	Fmoc-L-Cys(S-tBu)-Wang Resin	122	WAA5151	Boc-L-Lys(Fmoc)-Wang Resin	125
WAA11309	Fmoc-L-Cys(SS-tBu)-Wang Resin	121	WAA5153	Fmoc-L-Lys(Aloc)-Wang Resin	125
WAA11310	Fmoc-L-Gln(Trt)-Wang Resin	123	WAA5154	Fmoc-L-Lys(Biotin)-Wang Resin	125
WAA11312	Fmoc-L-Glu(tBu)-Wang Resin	122	WAA5155	Fmoc-L-Lys-Wang Resin	125
WAA11313	Fmoc-Gly-Wang Resin	123	WAA5156	Fmoc-L-Lys(Fmoc) Wang Resin	126
WAA11314	Fmoc-L-His(Trt)-Wang Resin	124	WAA5167	Fmoc-L-Hyp(tBu)-Wang Resin	124
WAA11315	Fmoc-L-Ile-Wang Resin	124	WAA6025	Fmoc-L-Pra-Wang Resin	127
WAA11316	Fmoc-L-Leu-Wang Resin	125	WAA6108	Fmoc-D-Asn(Trt)-Wang Resin	120
WAA11317	Fmoc-L-Lys(Boc)-Wang Resin	125	WAA6109	Fmoc-D-Arg(Pbf)-Wang Resin	120
WAA11318	Fmoc-L-Met-Wang Resin	126	WAA6110	Fmoc-D-Asp(tBu)-Wang Resin	121
WAA11319	Fmoc-L-Nle-Wang Resin	126	WAA6118	Fmoc-D-Cys(Trt)-Wang Resin	122
WAA11320	Fmoc-L-Orn(Boc)-Wang Resin	127	WAA6120	Fmoc-D-Glu(tBu)-Wang Resin	123
WAA11321	Fmoc-L-Phe-Wang Resin	127	WAA6136	Fmoc-D-His(Trt)-Wang Resin	124
WAA11322	Fmoc-L-Pro-Wang Resin	127	WAA6145	Fmoc-D-Leu-Wang Resin	125
WAA11323	Fmoc-L-Ser(tBu)-Wang Resin	128	WAA6150	Fmoc-D-Lys(Boc)-Wang Resin	126
WAA11324	Fmoc-L-Thr(tBu)-Wang Resin	128	WAA6155	Fmoc-D-Met-Wang Resin	126
WAA11326	Fmoc-L-Tyr(tBu)-Wang Resin	129	WAA6160	Fmoc-D-Phe-Wang Resin	127
WAA11327	Fmoc-L-Val-Wang Resin	129	WAA6165	Fmoc-D-Pro-Wang Resin	128
WAA11328	Fmoc-L-Trp(Boc)-Wang Resin	128	WAA6170	Fmoc-D-Ser(tBu)-Wang Resin	128
WAA2014	(Fmoc)4-Lys2-Lys-beta-Ala-Wang PS	75	WAA6175	Fmoc-D-Thr(tBu)-Wang Resin	128
WAA2445	Fmoc-L-Hse(Trt)-Wang Resin	124	WAA6181	Fmoc-D-Trp(Boc)-Wang Resin	129
WAA2630	Fmoc-4-Abu-Wang Resin	119	WAA6185	Fmoc-D-Tyr(tBu)-Wang Resin	129
WAA41301	Fmoc-L-Ala-Wang Resin	119	WAA6190	Fmoc-D-Val-Wang Resin	129
WAA41302	Fmoc-L-Arg(Pbf)-Wang Resin	120	XV30002	TG XV NH2 (100µm)	66
WAA41303	Fmoc-L-Arg(Pmc)-Wang Resin	120	XV30012	TG XV Trt-OH (100µm)	42
WAA41304	Fmoc-L-Asn(Trt)-Wang Resin	120	XV30015	TG XV HMPA (100µm)	48
WAA41305	Fmoc-L-Asp(tBu)-Wang Resin	121	XV30023	TG XV RAM (100µm)	53
WAA41306	Fmoc-L-Cys(Trt)-Wang Resin	122	XV30031	TG XV Trt-Cl (100µm)	42
WAA41307	Fmoc-L-Cys(Acm)-Wang Resin	121			
WAA41308	Fmoc-L-Cys(S-tBu)-Wang Resin	122			
WAA41309	Fmoc-L-Cys(SS-tBu)-Wang Resin	122			
WAA41310	Fmoc-L-Gln(Trt)-Wang Resin	123			
WAA41312	Fmoc-L-Glu(tBu)-Wang Resin	123			
WAA41313	Fmoc-Gly-Wang Resin	123			
WAA41314	Fmoc-L-His(Trt)-Wang Resin	124			
WAA41315	Fmoc-L-Ile-Wang Resin	124			
WAA41316	Fmoc-L-Leu-Wang Resin	125			
WAA41317	Fmoc-L-Lys(Boc)-Wang Resin	126			

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12.2. Name Index

NAME	CODE	PAGE	NAME	CODE	PAGE
(Lys)2-Lys-N2H3*5TFA	LS-3620	30	TG HL Trt-OH (75µm)	HL12012	42
(Lys)2-Lys-Gly-Gly-Gly-N2H3*5TFA	LS-3610	30	TG XV Trt-OH (100µm)	XV30012	42
(Lys)2-Lys-beta-Ala-beta-Ala-N2H3*5TFA	LS-3630	30	TG XV Trt-Cl (100µm)	XV30031	42
(Ser-Lys(Ser))2-Lys-Gly-Gly-Gly-N2H3*5TFA	LS-3640	31	2CT-OH Resin	BR-1170	43
(DOTA-Lys(DOTA))2-Lys-Gly-Gly-Gly-N2H3*TFA	LS-3600	31	2CT-OH Resin	BR-1175	43
(TPP-Lys(TPP))2-Lys-Gly-Gly-Gly-N2H3*4Br*TFA	LS-3650	31	2CT-NH2 Resin	BR-5220	43
HDMA	RL-2170	34	2CTC Resin	BR-1055	43
OxymaPure	RL-1180	34	2CTC Resin	BR-1060LL	43
Polystyrene (PEG crosslinked)	BR-5240	36	2CTC Resin	BR-1060	43
BHA-Resin	BR-5226	36	2CTC Resin	BR-1065	43
BHA-Resin	BR-5227	36	Mtt-Cl Resin	BR-1130	44
BHA-Resin	BR-5229	36	Mtt-Cl Resin	BR-1135	44
BHA-Resin	BR-5230	36	Mmt-OH Resin	BR-1160	44
BH-OH Resin	BR-5202	37	Mmt-OH Resin	BR-1165	45
BH-OH Resin	BR-5203	37	Mmt-Cl Resin	BR-1110	45
MBHA-Resin	BR-1120	37	Mmt-Cl Resin	BR-1115	45
MBHA-Resin	BR-1125	37	Dmt-OH Resin	BR-5063	45
4-Me-BH-Br Resin	BR-1180	37	Wang Resin	BR-5098	46
4-Me-BH-Br Resin	BR-1185	37	Wang Resin	BR-5244	46
4-Me-BH-OH Resin	BR-1190	37	Wang Resin	BR-5245	46
4-Me-BH-OH Resin	BR-1195	38	Wang Resin	BR-1420	46
4-MeO-BH-Br Resin	BR-1030	38	Wang-amide Resin	BR-5106	46
4-MeO-BH-Br Resin	BR-1035	38	Wang-Br Resin	BR-5216	46
4-MeO-BH-NH2 Resin	BR-1010	38	Wang-ChemMatrix®	CM-7320	46
4-MeO-BH-NH2 Resin	BR-1015	38	HypoGel® 200 Wang	BRH1150	47
2-Cl-BH-OH Resin	BR-5200	38	HypoGel® 400 Wang	BRH1270	47
2-Cl-BH-OH Resin	BR-5222	38	TG R Wang (90µm)	R28013	47
Rink Acid Resin	BR-5088	39	TG S Wang (90µm)	S-30013	47
Benzophenon Resin	BR-1245	39	TG HL Wang (75µm)	HL12013	47
4-Me-Benzophenon Resin	BR-1215	39	HMPA Resin	BR-5068	47
4-Me-Benzophenon Resin	BR-1220	39	HMPA Resin	BR-5250	47
4-MeO-Benzophenon Resin	BR-1225	39	HMPPA-MBHA Resin	BR-5069	48
4-MeO-Benzophenon Resin	BR-1230	39	TG XV HMPA (100µm)	XV30015	48
2-Cl-Benzophenon Resin	BR-1200	39	HMBA-AM Resin	BR-5066	48
2-Cl-Benzophenon Resin	BR-1205	39	HMBA-AM Resin	BR-5249	48
Oxime Resin	BR-5076	40	HMBA-MBHA Resin	BR-5207	48
Merrifield-PEG Resin	BR-5031	40	HypoGel® 200 HMBA	BRH1100	48
Merrifield-PEG Resin	BR-5032	40	HypoGel® 400 HMBA	BRH1220	48
Merrifield-PEG Resin	BR-5030	40	TG R HMBA (90µm)	R28014	49
PAM Resin	BR-5239	40	TG S HMBA (90µm)	S-30014	49
PAM Resin	BR-5210	41	TG HL HMBA (75µm)	HL12014	49
Trt-OH Resin	BR-1150	41	HMPB-ChemMatrix	CM-7820	49
Trt-OH Resin	BR-1155	41	TG S AC (90µm)	S-30011	49
Trt-Cl Resin	BR-1140	41	TG HL AC (75µm)	HL12011	49
Trt-Cl Resin	BR-1145	41	Brominated Wang Resin	BR-5060	50
HO-Trt-ChemMatrix®	CM-7420	41	Brominated Wang Resin	BR-5231	50
HypoGel® 200 Trt-OH	BRH1140	42	Fmoc-Rink-Amid AM resin	BR-1320	50
HypoGel® 400 Trt-OH	BRH1260	42	Fmoc-Rink Amide AM resin	BR-1330	50
TG S Trt-OH (90µm)	S-30012	42	Fmoc-Rink-Amid AM resin	BR-1340	50
			Fmoc-Rink-Amid-2CT resin	BR-1310	50
			Fmoc-Rink-Amid-2CT resin	BR-1315	50
			Fmoc-Rink-Amide PEG AM Resin	BR-1360	51

NAME	CODE	PAGE	NAME	CODE	PAGE
Fmoc-Rink-Amide PEG AM Resin	BR-1365	51	Polystyrene-O-Ph-CHO	BR-5276	60
Fmoc-Rink-Amide PEG MBHA Resin	BR-1366	51	Polystyrene-O-Ph-CHO	BR-5277	60
Fmoc-Rink-Amid MBHA resin	BR-1300	51	Polystyrene-Indole-CHO	BR-5218	60
Fmoc-Rink-Amid-MBHA resin	BR-1305	51	HypoGel® 200 FP	BRH1090	61
HypoGel® 200 RAM	BRH1110	52	HypoGel® 400 FP	BRH1210	61
HypoGel® 400 RAM	BRH1230	52	HypoGel® 200 CHO	BRH1060	61
TG R RAM (90µm)	R28023	52	HypoGel® 400 CHO	BRH1180	61
TG S RAM (90µm)	S-30023	52	TG S CHO (90µm)	S-30906	61
TG HL RAM (75µm)	HL12023	53	TG S CHO (130µm)	S-30136	61
TG XV RAM (100µm)	XV30023	53	TG HL CHO (75µm)	HL12906	61
H-Rink-Amide-ChemMatrix®	CM-7600	53	TG HL CHO (110µm)	HL12136	62
Ramage Resin	BR-5204	53	Polystyrene-FMP	BR-5272	62
PAL-MBHA Resin	BR-5209	53	Polystyrene-FMP	BR-5273	62
Fmoc-Sieber-PS resin	BR-2000	54	FMP AM Resin	BR-5056	62
Fmoc-Sieber-TG resin	BR-2005	54	HypoGel® 200 FMP	BRH1080	62
Fmoc-Photolabile Resin	BR-5205	54	HypoGel® 400 FMP	BRH1200	62
Safety Catch (Aliphatic) MBHA Resin	BR-5093	54	TG S FMP (90µm)	S-30016	62
Safety Catch (Aromatic) MBHA Resin	BR-5094	54	TG HL FMP (75µm)	HL12016	63
Polystyrene-COOH	BR-5213	55	BAL Resin	BR-5201	63
Polystyrene-COOH	BR-5259	55	Polystyrene-Me-NH ₂	BR-1000a	63
Polystyrene-AM-COOH	BR-5256	55	Polystyrene-Me-NH ₂	BR-1000b	63
Polystyrene-AM-COOH	BR-5257	55	Polystyrene-Me-NH ₂	BR-1000c	63
Polystyrene-AE-COOH	BR-5251	55	Polystyrene-Me-NH ₂	BR-1005a	63
Polystyrene-AE-COOH	BR-5252	55	Polystyrene-Me-NH ₂	BR-1005b	63
HypoGel®200 COOH	BRH1000	55	Polystyrene-Me-NH ₂	BR-1005c	64
HypoGel®400 COOH	BRH1020	56	Polystyrene-Et-NH ₂	BR-5266	64
TG S COOH (90µm)	S-30903	56	Polystyrene-Et-NH ₂	BR-5268	64
TG S COOH (130µm)	S-30133	56	Polystyrene-Bu-NH ₂	BR-5261	64
TG HL COOH (75µm)	HL12903	56	Polystyrene-Bu-NH ₂	BR-5262	64
TG HL COOH (110µm)	HL12133	56	Polystyrene-Bu-NH ₂	BR-5260	64
TG S CO-NHS (90µm)	S-30905	56	HypoGel®200 NH ₂	BRH1010	64
TG S CO-NHS (130µm)	S-30135	56	HypoGel®400 NH ₂	BRH1030	64
Polystyrene-Me-OH	BR-5019	57	Aminomethyl-ChemMatrix	CM-7111	65
Polystyrene-Me-OH	BR-5214	57	TG R NH ₂ (90µm)	R28902	65
Polystyrene-Me-OH	BR-5020	57	TG S NH ₂ (90µm)	S-30902	65
Polystyrene-Et-OH	BR-5113	57	TG S NH ₂ (130µm)	S-30132	65
Polystyrene-Et-OH	BR-5114	57	TG HL NH ₂ (75µm)	HL12902	65
Polystyrene-Bu-OH	BR-5111	57	TG HL NH ₂ (110µm)	HL12132	66
Polystyrene-Bu-OH	BR-5112	57	TG XV NH ₂ (100µm)	XV30002	66
HypoGel200® OH	BRH1280	58	Fmoc-NH-PEG AM Resin	BR-1400	66
HypoGel400® OH	BRH1290	58	Fmoc-NH-PEG AM Resin	BR-1405	66
TG S OH (130µm)	S-30130	58	Fmoc-NH-PEG MBHA Resin	BR-1406	66
TG S OH (90µm)	S-30900	58	Fmoc-TTDS-BH Resin	BR-9014	67
1-Diol Resin	BR-5206	58	Fmoc-TTDS-Trt Resin	BR-9013	67
2-Diol Resin	BR-5224	58	TTDS-Mmt-Resin	BR-9011	67
HypoGel® 200 Diol	BRH1070	58	TTDS-Mmt-Resin	BR-9012	67
HypoGel® 400 Diol	BRH1190	59	TG S NH-NH-Boc (90µm)	S-30907	68
TG HL Diol (75µm)	HL12010	59	TG S NH-NH-Boc (130µm)	S-30137	68
Polystyrene-CHO	BR-5217	60	ANP-AM Resin	BR-5054	68
Polystyrene-CHO	BR-5263	60	Fmoc-NH-O-2CT Resin	BR-5219	68
Polystyrene-AM-CHO	BR-5254	60	Fmoc-NH-O-2CT Resin	RAL1155	68
Polystyrene-AM-CHO	BR-5255	60	Polystyrene-Br	BR-5212	69

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Polystyrene-Et-Br	BR-5264	69	H-L-Asn(Trt)-2CT Resin	RAA1045	80
Polystyrene-Et-Br	BR-5265	69	H-L-Asn(Trt)-2CT Resin	RAA1046	80
HypoGel® 200 Br	BRH1040	69	H-L-Asp(tBu)-2CT Resin	RAA1047	80
HypoGel® 400 Br	BRH1160	69	H-L-Asp(tBu)-2CT Resin	RAA1048	81
TG S Br (90µm)	S-30901	69	H-D-Asp(tBu)-2CT Resin	RAA1049	81
TG S Br (130µm)	S-30131	69	Fmoc-L-Asp(2CT resin)-NH ₂	RAA2610	81
2-Bromoacetal Resin	BR-5061	70	H-L-Cys(Clt)-2CT Resin	RAA1050	81
4-Bromoacetal Resin	BR-5225	70	H-L-Cys(Mmt)-2CT Resin	RAA1055	81
Polystyrene-COCH ₂ -Cl	BR-5084	70	H-L-Cys(Trt)-2CT Resin	RAA1065	82
HypoGel® 200 Bromo Acetal	BRH1050	70	H-L-Cys(Trt)-2CT Resin	RAA1066	82
HypoGel® 400 Bromo Acetal	BRH1170	70	Fmoc-L-Cys(Mmt resin)-NH ₂	RAA2620	82
TG HL Bromo Acetal (110µm)	HL12019	70	H-D-Cys(Trt)-2CT Resin	RAA1060	82
Polystyrene-Me-SH	BR-5274	71	H-L-Dap(Boc)-2CT Resin	RAA1330	82
Polystyrene-Me-SH	BR-5275	71	H-L-Dap(Boc)-2CT Resin	RAA1331	82
Polystyrene-Et-SH	BR-5270	71	1,2-Diaminoethane-trityl resin	RDA1020	82
Polystyrene-Et-SH	BR-5271	71	H-L-Glu(2CT Resin)-OAll	RAA1078	83
HypoGel® 200 SH	BRH1130	71	H-L-Glu(2CT resin)-OtBu	RAA2700	83
HypoGel® 400 SH	BRH1250	71	H-L-Glu(tBu)-2CT Resin	RAA1075	83
TG S SH (90µm)	S309040	71	H-L-Glu(tBu)-2CT Resin	RAA1076	83
TG S SH (130µm)	S301340	72	H-D-Glu(tBu)-2CT Resin	RAA1074	83
TG HL SH (75µm)	HL12904	72	Fmoc-L-Glu(2CT resin)-NH ₂	RAA2630	83
TG HL SH (110µm)	HL12134	72	H-L-Gln-2CT Resin	RAA1085	84
Trt-SH Resin	BR-5215	72	H-L-Gln-2CT Resin	RAA1086	84
REM Resin	SR-1036	73	H-L-Gln(Trt)-2CT Resin	RAA1087	84
REM Resin	SR-1118	73	H-L-Gln(Trt)-2CT Resin	RAA1088	84
Linear Vinyl Sulfone Resin	BR-5208	73	H-Gly-2CT Resin	RAA1040	84
Polystyrene-Allyl	BR-5248	73	H-Gly-2CT Resin	RAA1041	84
HypoGel® 200 REM	BRH1120	73	H-L-His(Clt)-2CT Resin	RAA1093	84
HypoGel® 400 REM	BRH1240	73	H-L-His(Mmt)-2CT Resin	RAA1095	85
TG HL REM (75µm)	HL12018	73	H-L-His(Mtt)-2CT Resin	RAA1097	85
Polystyrene-AM-AC-HMPA	TR-1000	74	H-L-His(Trt)-2CT Resin	RAA1105	85
TentaGel-AC-HMPA	TR-1200	74	H-L-His(Trt)-2CT Resin	RAA1106	85
Polystyrene-AM-(AC-HMPA)-RAM	TR-2000	74	H-D-His(Trt)-2CT Resin	RAA1100	85
TentaGel-AM-(AC-HMPA)-RAM	TR-2100	74	Fmoc-L-His(Mmt resin)-NH ₂	RAA2640	85
Trt-S-Ac-L-Leu-PAM Resin	PAM5795	75	H-L-Hse(Me)-2CT Resin	RAA1115	85
Fmoc-L-Asn(Rink-Resin)-OAll	CAA1000	75	H-L-Hse(Trt)-2CT Resin	RAA1125	86
Fmoc-L-Gln(Rink-Resin)-OAll	RAA1077	75	H-L-Hse(Trt)-2CT Resin	RAA1126	86
(Fmoc)4-Lys2-Lys-beta-Ala-Wang PS	WAA2014	75	H-D-Hse(Trt)-2CT Resin	RAA1120	86
(Fmoc)4-Lys2-Lys-beta-Ala-Wang TG	SAL2013	76	H-Inp-2CT Resin	RAA1210	86
(Fmoc)4-Lys2-Lys-Rink TG	SAL2023	76	H-L-Ile-2CT Resin	RAA1135	86
SCAL-Linker	RL-2260	78	H-L-Ile-2CT Resin	RAA1136	86
H-L-Ala-2CT Resin	RAA1005	79	H-D-allo-Ile-2CT Resin	RAA1134	86
H-L-Ala-2CT Resin	RAA1006	79	H-L-Leu-2CT Resin	RAA1145	86
H-D-Ala-2CT Resin	RAA1004	79	H-L-Leu-2CT Resin	RAA1146	87
3-Aminobenzoic acid-2CT Resin	RAA1010	79	H-D-Leu-2CT Resin	RAA1144	87
4-Aminobenzoic acid-2CT Resin	RAA1015	79	H-L-Lys(Boc)-2CT Resin	RAA1155	87
4-Aminomethylbenzoic acid-2CT Resin	RAA1020	79	H-L-Lys(Boc)-2CT Resin	RAA1156	87
H-L-Arg(Pbf)-2CT Resin	RAA1030	79	H-D-Lys(Boc)-2CT Resin	RAA1154	87
H-L-Arg(Pbf)-2CT Resin	RAA1031	80	H-L-Lys(Mtt)-2CT Resin	RAA1165	87
H-D-Arg(Pbf)-2CT Resin	RAA1029	80	H-D-Lys(Mtt)-2CT Resin	RAA1160	87
H-L-Asn-2CT Resin	RAA1044	80	H-L-Lys(Trt)-2CT Resin	RAA1167	87
H-D-Asn-2CT Resin	RAA1043	80	H-L-Lys(Trt)-2CT Resin	RAA1168	88

NAME	CODE	PAGE	NAME	CODE	PAGE
H-L-Lys(2CT-Resin)-OAll	RAA1320	88	Fmoc-L-Tyr(2CT resin)-NH2	RAA2690	95
Fmoc-L-Lys(2CT-Resin)-OAll	RAA1325	88	H-L-Val-2CT Resin	RAA1300	95
Fmoc-L-Lys(Trt-Resin)-OAll	CAA1008	88	H-L-Val-2CT Resin	RAA1301	95
Fmoc-L-Lys(Mmt resin)-O-Trt	RAA2660	88	H-D-Val-2CT Resin	RAA1299	95
H-L-Met-2CT Resin	RAA1175	88	Fmoc-L-Ala-Trt TG	SAL1201	96
H-L-Met-2CT Resin	RAA1176	88	Fmoc-D-Ala-Trt TG	SAD1201	96
H-D-Met-2CT Resin	RAA1170	89	Fmoc-L-Arg(Pbf)-Trt TG	SAL1202	96
H-L-Mim-2CT Resin	RAA4000	89	Fmoc-D-Arg(Pbf)-Trt TG	SAD1202	96
Fmoc-L-Nle-2CT Resin	RAA6220	89	Fmoc-L-Arg(Pmc)-Trt TG	SAL1203	96
H-L-Orn(Boc)-2CT Resin	RAA1185	89	Fmoc-D-Arg(Pmc)-Trt TG	SAD1203	96
H-L-Orn(Boc)-2CT Resin	RAA1186	89	Fmoc-L-Asn(Trt)-Trt TG	SAL1204	97
H-L-Orn(Mtt)-2CT Resin	RAA1195	89	Fmoc-D-Asn(Trt)-Trt TG	SAD1204	97
H-L-Phe-2CT Resin	RAA1205	89	Fmoc-L-Asp(tBu)-Trt TG	SAL1205	97
H-L-Phe-2CT Resin	RAA1206	90	Fmoc-D-Asp(tBu)-Trt TG	SAD1205	97
H-D-Phe-2CT Resin	RAA1200	90	Fmoc-L-Cys(Acm)-Trt TG	SAL1207	97
H-L-Pip-2CT Resin	RAA5962	90	Fmoc-D-Cys(Acm)-Trt TG	SAD1207	97
Piperazine-trityl resin	RDA1065	90	Fmoc-L-Cys(SS-tBu)-Trt TG	SAL1209	97
H-L-Pro-2CT Resin	RAA1220	90	Fmoc-D-Cys(SS-tBu)-Trt TG	SAD1209	98
H-L-Pro-2CT Resin	RAA1221	90	Fmoc-L-Cys(S-tBu)-Trt TG	SAL1208	98
H-D-Pro-2CT Resin	RAA6225	90	Fmoc-D-Cys(S-tBu)-Trt TG	SAD1208	98
H-L-Ser(Me)-2CT Resin	RAA1232	90	Fmoc-L-Cys(Trt)-Trt TG	SAL1206	98
H-L-Ser(tBu)-2CT Resin	RAA1230	91	Fmoc-D-Cys(Trt)-Trt TG	SAD1206	98
H-L-Ser(tBu)-2CT Resin	RAA1231	91	Fmoc-L-Glu(tBu)-Trt TG	SAL1212	98
H-D-Ser(tBu)-2CT Resin	RAA1229	91	Fmoc-D-Glu(tBu)-Trt TG	SAD1212	98
H-L-Ser(Trt)-2CT Resin	RAA1240	91	Fmoc-L-Gln(Trt)-Trt TG	SAL1210	99
H-L-Ser(Trt)-2CT Resin	RAA1241	91	Fmoc-D-Gln(Trt)-Trt TG	SAD1210	99
H-D-Ser(Trt)-2CT Resin	RAA1235	91	Fmoc-Gly-Trt TG	SAL1213	99
Fmoc-L-Ser(2CT resin)-NH2	RAA2670	91	Fmoc-L-His(Trt)-Trt TG	SAL1214	99
H-L-Thr(Me)-2CT Resin	RAA1252	92	Fmoc-D-His(Trt)-Trt TG	SAD1214	99
H-L-Thr(tBu)-2CT Resin	RAA1250	92	Fmoc-L-Ile-Trt TG	SAL1215	99
H-L-Thr(tBu)-2CT Resin	RAA1251	92	Fmoc-D-Ile-Trt TG	SAD1215	99
H-D-Thr(tBu)-2CT Resin	RAA1249	92	Fmoc-L-Leu-Trt TG	SAL1216	99
H-L-Thr(Trt)-2CT Resin	RAA1260	92	Fmoc-D-Leu-Trt TG	SAD1216	100
H-L-Thr(Trt)-2CT Resin	RAA1261	92	Fmoc-L-Lys(Boc)-Trt TG	SAL1217	100
H-D-Thr(Trt)-2CT Resin	RAA1255	92	Fmoc-D-Lys(Boc)-Trt TG	SAD1217	100
Fmoc-L-Thr(MeO-BH resin)-NH2	RAA2680	93	Fmoc-L-Met-Trt TG	SAL1218	100
H-L-Thr(tBu)-ol-2CT Resin	RAL1114	93	Fmoc-D-Met-Trt TG	SAD1218	100
H-L-Thr(tBu)-ol-2CT Resin	RAL1115	93	Fmoc-L-Nle-Trt TG	SAL1219	100
Fmoc-L-Thr(tBu)-ol-2CT Resin	RAL1126	93	Fmoc-D-Nle-Trt TG	SAD1219	100
Fmoc-L-Threoninol(Mmt resin)-OTrt	RAA3280	93	Fmoc-L-Orn(Boc)-Trt TG	SAL1220	100
H-L-Tic-2CT Resin	RAA5977	93	Fmoc-D-Orn(Boc)-Trt TG	SAD1220	101
H-L-Trp(Boc)-2CT Resin	RAA1305	93	Fmoc-L-Phe-Trt TG	SAL1221	101
H-L-Trp(Boc)-2CT Resin	RAA1306	94	Fmoc-D-Phe-Trt TG	SAD1221	101
H-L-Trp-2CT Resin	RAA1270	94	Fmoc-L-Pro-Trt TG	SAL1222	101
H-L-Trp-2CT Resin	RAA1271	94	Fmoc-D-Pro-Trt TG	SAD1222	101
H-D-Trp-2-CT Resin	RAA1265	94	Fmoc-L-Ser(tBu)-Trt TG	SAL1223	101
H-L-Tyr(Clt)-2CT Resin	RAA1290	94	Fmoc-D-Ser(tBu)-Trt TG	SAD1223	101
H-L-Tyr(Me)-2CT Resin	RAA1292	94	Fmoc-L-Thr(tBu)-Trt TG	SAL1224	101
H-L-Tyr(tBu)-2CT Resin	RAA1280	94	Fmoc-D-Thr(tBu)-Trt TG	SAD1224	102
H-L-Tyr(tBu)-2CT Resin	RAA1281	95	Fmoc-L-Trp(Boc)-Trt TG	SAL1228	102
H-D-Tyr(tBu)-2CT Resin	RAA1282	95	Fmoc-D-Trp(Boc)-Trt TG	SAD1228	102
Fmoc-L-Tyr(2CT resin)-OAll	RAA6230	95	Fmoc-L-Tyr(tBu)-Trt TG	SAL1226	102

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NAME	CODE	PAGE	NAME	CODE	PAGE
Fmoc-D-Tyr(tBu)-Trt TG	SAD1226	102	Fmoc-L-Val-AC TG	SAL1127	109
Fmoc-L-Val-Val-AC TG	SAL1227	102	Fmoc-D-Val-AC TG	SAD1127	109
Fmoc-D-Val-Val-AC TG	SAD1227	102	Fmoc-NHN=Pyv Resin	PYV1000	110
Fmoc-L-Ala-AC TG	SAL1101	103	Fmoc-L-Ala-NHN=Pyv Resin	PYV1100	110
Fmoc-D-Ala-AC TG	SAD1101	103	Fmoc-L-Arg(Pbf)-NHN=Pyv Resin	PYV1110	110
Fmoc-L-Arg(Pbf)-AC TG	SAL1102	103	Fmoc-L-Asn(Trt)-NHN=Pyv Resin	PYV1120	110
Fmoc-D-Arg(Pbf)-AC TG	SAD1102	103	Fmoc-L-Asp(tBu)-NHN=Pyv Resin	PYV1130	110
Fmoc-L-Arg(Pmc)-AC TG	SAL1103	103	Fmoc-L-Cys(Trt)-NHN=Pyv Resin	PYV1140	110
Fmoc-D-Arg(Pmc)-AC TG	SAD1103	103	Fmoc-L-Glu(tBu)-NHN=Pyv Resin	PYV1150	111
Fmoc-L-Asn(Trt)-AC TG	SAL1104	104	Fmoc-L-Gln(Trt)-NHN=Pyv Resin	PYV1160	111
Fmoc-D-Asn(Trt)-AC TG	SAD1104	104	Fmoc-Gly-NHN=Pyv Resin	PYV1170	111
Fmoc-L-Asp(tBu)-AC TG	SAL1105	104	Fmoc-L-His(Trt)-NHN=Pyv Resin	PYV1180	111
Fmoc-D-Asp(tBu)-AC TG	SAD1105	104	Fmoc-L-Ile-NHN=Pyv Resin	PYV1190	111
Fmoc-L-Cys(Acm)-AC TG	SAL1107	104	Fmoc-L-Leu-NHN=Pyv Resin	PYV1200	111
Fmoc-D-Cys(Acm)-AC TG	SAD1107	104	Fmoc-L-Lys(Boc)-NHN=Pyv Resin	PYV1210	111
Fmoc-L-Cys(SS-tBu)-AC TG	SAL1109	104	Fmoc-L-Met-NHN=Pyv Resin	PYV1220	111
Fmoc-D-Cys(SS-tBu)-AC TG	SAD1109	105	Fmoc-L-Phe-NHN=Pyv Resin	PYV1230	112
Fmoc-L-Cys(S-tBu)-AC TG	SAL1108	105	Fmoc-L-Pro-NHN=Pyv Resin	PYV1240	112
Fmoc-D-Cys(S-tBu)-AC TG	SAD1108	105	Fmoc-L-Ser(tBu)-NHN=Pyv Resin	PYV1250	112
Fmoc-L-Cys(Trt)-AC TG	SAL1106	105	Fmoc-L-Thr(tBu)-NHN=Pyv Resin	PYV1260	112
Fmoc-D-Cys(Trt)-AC TG	SAD1106	105	Fmoc-L-Trp(Boc)-NHN=Pyv Resin	PYV1270	112
Fmoc-L-Glu(tBu)-AC TG	SAL1112	105	Fmoc-L-Tyr(tBu)-NHN=Pyv Resin	PYV1280	112
Fmoc-D-Glu(tBu)-AC TG	SAD1112	105	Fmoc-L-Val-NHN=Pyv Resin	PYV1290	112
Fmoc-L-Gln(Trt)-AC TG	SAL1110	106	SEA-PS resin	SEA1000	113
Fmoc-D-Gln(Trt)-AC TG	SAD1110	106	SEA-PS resin	SEA2000	113
Fmoc-Gly-AC TG	SAL1113	106	Fmoc-L-Ala-SEA-PS resin	SEA1001	113
Fmoc-L-His(Trt)-AC TG	SAL1114	106	Fmoc-L-Ala-SEA-PS resin	SEA2001	113
Fmoc-D-His(Trt)-AC TG	SAD1114	106	Fmoc-L-Arg(Pbf)-SEA-PS resin	SEA1002	113
Fmoc-L-Ile-AC TG	SAL1115	106	Fmoc-L-Arg(Pbf)-SEA-PS resin	SEA2002	113
Fmoc-D-Ile-AC TG	SAD1115	106	Fmoc-L-Asn(Trt)-SEA-PS resin	SEA1003	113
Fmoc-L-Leu-AC TG	SAL1116	106	Fmoc-L-Asn(Trt)-SEA-PS resin	SEA2003	114
Fmoc-D-Leu-AC TG	SAD1116	107	Fmoc-L-Asp(tBu)-SEA-PS resin	SEA1004	114
Fmoc-L-Lys(Boc)-AC TG	SAL1117	107	Fmoc-L-Asp(tBu)-SEA-PS resin	SEA2004	114
Fmoc-D-Lys(Boc)-AC TG	SAD1117	107	Fmoc-L-Cys(S-tBu)-SEA-PS resin	SEA1005	114
Fmoc-L-Met-AC TG	SAL1118	107	Fmoc-L-Cys(S-tBu)-SEA-PS resin	SEA2005	114
Fmoc-D-Met-AC TG	SAD1118	107	Fmoc-L-Glu(tBu)-SEA-PS resin	SEA1007	114
Fmoc-L-Nle-AC TG	SAL1119	107	Fmoc-L-Glu(tBu)-SEA-PS resin	SEA2007	114
Fmoc-D-Nle-AC TG	SAD1119	107	Fmoc-L-Gln(Trt)-SEA-PS resin	SEA1006	114
Fmoc-L-Orn(Boc)-AC TG	SAL1120	107	Fmoc-L-Gln(Trt)-SEA-PS resin	SEA2006	115
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Fmoc-L-Pro-AC TG	SAL1122	108	Fmoc-L-His(Trt)-SEA-PS resin	SEA2009	115
Fmoc-D-Pro-AC TG	SAD1122	108	Fmoc-L-Ile-SEA-PS resin	SEA1010	115
Fmoc-L-Ser(tBu)-AC TG	SAL1123	108	Fmoc-L-Ile-SEA-PS resin	SEA2010	115
Fmoc-D-Ser(tBu)-AC TG	SAD1123	108	Fmoc-L-Leu-SEA-PS resin	SEA1011	115
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Fmoc-L-Tyr(tBu)-AC TG	SAL1126	109	Fmoc-L-Met-SEA-PS resin	SEA2013	116
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Fmoc-L-Tyr(tBu)-SEA-PS resin	SEA1019	117	Fmoc-L-Lys-Wang Resin	WAA5155	125
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Fmoc-L-Val-SEA-PS resin	SEA1020	118	Fmoc-L-Lys(Biotin)-Wang Resin	WAA5154	125
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Fmoc-L-Arg(Pmc)-Wang resin	WAA11303	120	Fmoc-L-Phe-Wang Resin	WAA11321	127
Fmoc-L-Arg(Pmc)-Wang Resin	WAA41303	120	Fmoc-L-Phe-Wang Resin	WAA41321	127
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13. Terms and Conditions of Sales

All orders placed by a buyer are accepted and all contracts are made subject to the terms which shall prevail and be effective notwithstanding any variations or additions contained in any order or other document submitted by the buyer. No modification of these terms shall be binding upon Iris Biotech GmbH unless made in writing by an authorised representative of Iris Biotech GmbH.

Placing of Orders

Every order made by the buyer shall be deemed an offer by the buyer to purchase products from Iris Biotech GmbH and will not be binding on Iris Biotech GmbH until a duly authorised representative of Iris Biotech GmbH has accepted the offer made by the buyer. Iris Biotech GmbH may accept orders from commercial, educational or government organisations, but not from private individuals and Iris Biotech GmbH reserves the right to insist on a written order and/or references from the buyer before proceeding.

There is no minimum order value. At the time of acceptance of an order Iris Biotech GmbH will either arrange prompt despatch from stock or the manufacture/acquisition of material to satisfy the order. In the event of the latter Iris Biotech GmbH will indicate an estimated delivery date. In addition to all its other rights Iris Biotech GmbH reserves the right to refuse the subsequent cancellation of the order if Iris Biotech GmbH expects to deliver the product on or prior to the estimated delivery date. Time shall not be of the essence in respect of delivery of the products. If Iris Biotech GmbH is unable to deliver any products by reason of any circumstances beyond its reasonable control („Force Majeure“) then the period for delivery shall be extended by the time lost due to such Force Majeure. Details of Force Majeure will be forwarded by Iris Biotech GmbH to the buyer as soon as reasonably practicable.

Prices, Quotations and Payments

Prices are subject to change. For the avoidance of doubt, the price advised by Iris Biotech GmbH at the time of the buyer placing the order shall supersede any previous price indications. The buyer must contact the local office of Iris Biotech GmbH before ordering if further information is required. Unless otherwise agreed by the buyer and Iris Biotech GmbH, the price shall be for delivery ex-works. In the event that the buyer requires delivery of the products otherwise than ex-works the buyer should contact the local office of Iris Biotech GmbH in order to detail its requirements. Iris Biotech GmbH shall, at its discretion, arrange the buyer's delivery requirements including, without limitation, transit insurance, the mode of transit (Iris Biotech GmbH reserves the right to vary the mode of transit if any regulations or other relevant considerations so require) and any special packaging requirements (including cylinders). For the avoidance of doubt all costs of delivery and packaging in accordance with the buyer's requests over and above that of delivery in standard packaging ex-works shall be for the buyer's account unless otherwise agreed by both parties. Incoterms 2010 shall apply. Any tax, duty or charge imposed by governmental authority or otherwise and any other applicable taxes, duties or charges shall be for the buyer's account. Iris Biotech GmbH may, on request and where possible, provide quotations for multiple packs or bulk quantities, and non-listed items. Irrespective of the type of request or means of response all quotations must be accepted by the buyer without condition and in writing before an order will be accepted by Iris Biotech GmbH. Unless agreed in writing on different terms, quotations are valid for 30 days from the date thereof. Payment terms are net 30 days from invoice date unless otherwise agreed in writing. Iris Biotech GmbH reserves the right to request advance payment at its discretion. For overseas transactions the buyer shall pay all the banking charges of Iris Biotech GmbH. The buyer shall not be entitled to withhold or set-off payment for the products for any reason whatsoever. Government/Corporate Visa and MasterCard (and other such credit cards) may be accepted on approved accounts for payment of the products. Personal credit cards are not acceptable. Failure to comply with the terms of payment of Iris Biotech GmbH shall constitute default without reminder. In these circumstances Iris Biotech GmbH may (without prejudice to any other of its rights under these terms) charge interest to accrue on a daily basis at the rate of 2% per month from the date upon which payment falls due to the actual date of payment (such interest shall be paid monthly). If the buyer shall fail to fulfil the payment terms in respect of any invoice of Iris Biotech GmbH Iris Biotech GmbH may demand payment of all outstanding balances from the buyer whether due or not and/or cancel all outstanding orders and/or decline to make further deliveries or provision of services except upon receipt of cash or satisfactory securities. Until payment by the buyer in full of the price and any other monies due to Iris Biotech GmbH in respect of all other products or services supplied or agreed to be supplied by Iris Biotech GmbH to the buyer (including but without limitation any costs of delivery) the property in the products shall remain vested in Iris Biotech GmbH.

Shipping, Packaging and Returns

The buyer shall inspect goods immediately on receipt and inform Iris Biotech GmbH of any shortage or damage within five days. Quality problems must be notified within ten days of receipt. Goods must not be returned without prior written authorisation of Iris Biotech GmbH. Iris Biotech GmbH shall at its sole discretion replace the defective products (or parts thereof) free of charge or refund the price (or proportionate price) to buyer. Opened or damaged containers cannot be returned by the buyer without the written prior agreement of Iris Biotech GmbH. In the case of agreed damaged containers which cannot be so returned, the buyer assumes responsibility for the safe disposal of such containers in accordance with all applicable laws.

Product Quality, Specifications and Technical Information

Products are analysed in the Quality Control laboratories of Iris Biotech GmbH's production partners by methods and procedures which Iris Biotech GmbH considers appropriate. In the event of any dispute concerning reported discrepancies arising from the buyer's analytical results, determined by the buyer's own analytical procedures, Iris Biotech GmbH reserves the right to rely on the results of own analytical methods of Iris Biotech GmbH. Certificates of Analysis or Certificates of Conformity are available at the discretion of Iris Biotech GmbH for bulk orders but not normally for prepack orders. Iris Biotech GmbH reserves the right to make a charge for such Certification. Specifications may change and reasonable variation from any value listed should not form the basis of a dispute. Any supply by Iris Biotech GmbH of bespoke or custom product for a buyer shall be to a specification agreed by both parties in writing. Technical information, provided orally, in writing, or by electronic means by or on behalf of Iris Biotech GmbH, including any descriptions, references, illustrations or diagrams in any Catalogue or brochure, is provided for guidance purposes only and is subject to change.

Safety

All chemicals should be handled only by competent, suitably trained persons, familiar with laboratory procedures and potential chemical hazards. The burden of safe use of the products of Iris Biotech GmbH vests in the buyer. The buyer assumes all responsibility for warning his employees, and any persons who might reasonably be expected to come into contact with the products, of all risks to person and property in any way connected with the products and for instructing them in their safe handling and use. The buyer also assumes the responsibility for the safe disposal of all products in accordance with all applicable laws.

Uses, Warranties and Liabilities

All products of Iris Biotech GmbH are intended for laboratory research purposes and unless otherwise stated on product labels, in the catalogue and product information sheet of Iris Biotech GmbH or in other literature furnished to the buyer, are not to be used for any other purposes, including but not limited to use as or as components in drugs for human or animal use, medical devices, cosmetics, food additives, household chemicals, agricultural or horticultural products or pesticides. Iris Biotech GmbH offers no warranty regarding the fitness of any product for a particular purpose and shall not be responsible for any loss or damage whatsoever arising therefrom. No warranty or representation is given by Iris Biotech GmbH that the products do not infringe any letters patent, trademarks, registered designs or other industrial rights. The buyer further warrants to Iris Biotech GmbH that any use of the products in the United States of America shall not result in the products becoming adulterated or misbranded within the meaning of the Federal Food, Drug and Cosmetic Act (or such equivalent legislation in force in the buyer's jurisdiction) and shall not be materials which may not, under sections 404, 505 or 512 of the Act, be introduced into interstate commerce. The buyer acknowledges that, since the products of Iris Biotech GmbH are intended for research purposes, they may not be on the Toxic Substances Control Act 1976 („TSCA“) inventory. The buyer warrants that it shall ensure that the products are approved for use under the TSCA (or such other equivalent legislation in force in the buyer's jurisdiction), if applicable. The buyer shall be responsible for complying with any legislation or regulations governing the use of the products and their importation into the country of destination (for the avoidance of doubt to include, without limitation, the TSCA and all its amendments, all EINECS, ELINCS and NONS regulations). If any licence or consent of any government or other authority shall be required for the acquisition, carriage or use of the products by the buyer the buyer shall obtain the same at its own expense and if necessary produce evidence of the same to Iris Biotech GmbH on demand. Failure to do so shall not entitle the buyer to withhold or delay payment. Any additional expenses or charges incurred by Iris Biotech GmbH resulting from such failure shall be for the buyer's account. Save for death or personal injury caused by negligence of Iris Biotech GmbH, sole obligation of Iris Biotech GmbH and buyer's exclusive remedy with respect to the products proved to the satisfaction of Iris Biotech GmbH to be defective or products incorrectly supplied shall be to accept the return of said products to Iris Biotech GmbH for refund of the actual purchase price paid by the buyer (or proportionate part thereof), or replacement of the defective product (or part thereof) with alternative product. Iris Biotech GmbH shall have no liability to the buyer under or arising directly or indirectly out of or otherwise in connection with the supply of products by Iris Biotech GmbH to the buyer and/or their re-sale or use by the buyer or for any product, process or services of the buyer which in any way comprises the product in contract tort (including negligence or breach of statutory duty) or otherwise for pure economic loss, loss of profit, business, reputation, depletion of brand, contracts, revenues or anticipated savings or for any special indirect or consequential damage or loss of any nature except as may otherwise be expressly provided for in these terms. All implied warranties, terms and representations in respect of the products (whether implied by statute or otherwise) are excluded to the fullest extent permitted by law. The buyer shall indemnify Iris Biotech GmbH for and against any and all losses, damages and expenses, including legal fees and other costs of defending any action, that Iris Biotech GmbH may sustain or incur as a result of any act or omission by the buyer, its officers, agents or employees, its successors or assignees, its customers or all other third parties, whether direct or indirect, in connection with the use of any product. For the avoidance of doubt and in the event that Iris Biotech GmbH supplies bespoke or custom product to the buyer's design or specification, this indemnity shall extend to include any claim by a third party that the manufacture of the product for the buyer or the use of the product by the buyer infringes the intellectual property rights of any third party.

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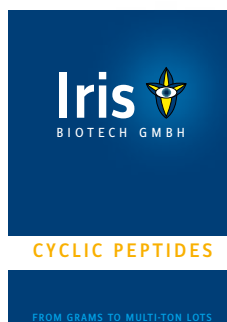
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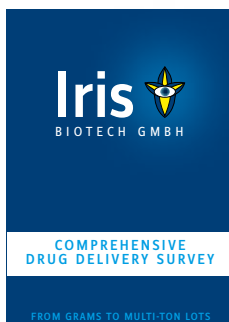
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