

Preloaded Resins

NEW

Synthesis-Ready Preloaded Resins for Solid-Phase Synthesis of Stable Isotope-Labeled Tryptic Peptides

These 2-ClTrt-resins, originally introduced by Barlos and coworkers,¹ are ideal for the synthesis of isotopically labeled tryptic peptides for stable isotope dilution (SID)/selective reaction monitoring (SRM) assays for quantitative proteomics. The resins are prepared from labeled, protected amino acids with the highest chemical, isotopic and chiral purity available. Additionally, because enantiomerization does not occur during the loading of 2-ClTrt resin,² peptides containing C-terminal-labeled-arginine (Pbf) or labeled-lysine (BOC) residues can be produced essentially free from contamination by diastereomeric side-products.

2-ClTrt resins are excellent supports for use in standard solid-phase peptide synthesis protocols. Final cleavage of the peptides from the resin with standard trifluoroacetic acid-based cocktails leads to fully deprotected peptide C-terminal acids terminated with an isotopically labeled arginine ($\Delta m = +10$ amu) or lysine ($\Delta m = +8$ amu). Alternative mild acid protocols³ can provide isotopically labeled, protected peptide fragments.

References

1. Barlos, K.; Gatos, D.; Kallitsis, J.; Papaphotiu, G.; Sotiriu, P.; Yao, W.Q.; Schafer, W. **1989**. Synthesis of Protected Peptide-Fragments Using Substituted Triphenylmethyl Resins. *Tetrahedron Lett*, *30*, 3943-3946.
2. Fujiwara, Y.; Akaji, K.; Kiso, Y. **1994**. Racemization-Free Synthesis of C-Terminal Cysteine-Peptide Using 2-Chlorotrityl Resin. *Chem Pharm Bull*, *42*, 724-726.
3. Barlos, K.; Gatos, D. **1999**. 9-Fluorenylmethoxycarbonyl/tButyl-based convergent protein synthesis. *Biopolymers*, *51*, 266-278.

Product Description

The resin is prepared from the highest quality cross-linked polystyrene (1% divinylbenzene) with the 2-chlorotrityl linkage directly attached to the support.

Loading: 0.25-0.5 mmol/g; copoly (styrene-1% DVB)

Particle size: 100-200 mesh

Reagents: L-Arginine-*N*-FMOC, Pbf
(¹³C₆, 99%; ¹⁵N₄, 99%)

or

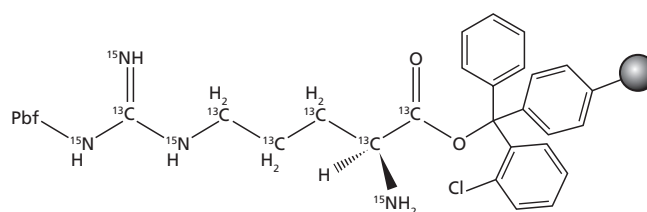
L-Lysine- α -*N*-FMOC, ϵ -*N*-*t*-BOC
(¹³C₆, 99%; ¹⁵N₂, 99%)

Isotope Enrichment: >99%

Chiral Purity: >99%

Catalog No.	Description
SRPR-ARG-CN	L-Arginine (Pbf) (¹³ C ₆ , 99%; ¹⁵ N ₄ , 99%) – 2-ClTrt resin
SRPR-LYS-CN	L-Lysine (BOC) (¹³ C ₆ , 99%; ¹⁵ N ₂ , 99%) – 2-ClTrt resin

SRPR-ARG-CN L-Arginine (Pbf) (¹³C₆, 99%; ¹⁵N₄, 99%) – 2-ClTrt resin



SRPR-LYS-CN L-Lysine (BOC) (¹³C₆, 99%; ¹⁵N₂, 99%) – 2-ClTrt resin

