

Custom Peptides and their Applications

Mimotopes' peptides are made using the latest technology and advanced solid phase techniques.

Standard peptide lengths range from 2 to 35 residues, in quantities from 1mg to greater than 100mg. We will purify the peptides to your requirements, or you may choose from the standard range; unpurified, 70%, 80%, 90% and 95%.

Peptides that are Right for You

The custom-synthesized peptides you receive from Mimotopes are right for you in two ways

- They have been made to suit your requirements, often with help in their design from experienced Mimotopes staff, so they are right for your application
- You can rely on them being made correctly, exactly to the design you ordered. You will be able to relax, knowing you have chosen a reliable supplier

Choices, Choices, Choices ...

Mimotopes offers a wide range of options, including modified residues such as phosphoamino acids, fluorescent labels, biotinylated peptides, acetylation, amidation, fatty acid capping, cyclic peptides (disulfide and N- to C-), succinylation, nonradioactive isotopic labelling, branched peptides etc. We also quote for as little as 1mg of peptide, allowing you to save by ordering only the amount you need. For applications needing economical sets of screening peptides, ask about our PepSets™, which are libraries of "as synthesized" peptides.

Modern Synthesis and Purification Technology

Mimotopes' custom peptides are synthesized in modern, automated synthesizers using the mild Fmoc chemistry method.

Up-to-date chemistry includes the use of preformed secondary-structure disrupting dipeptides known as Pseudoprolines¹ to minimize poor coupling efficiencies which result when peptide molecules form secondary structures during synthesis.

Computer control and monitoring of peptide assembly and purification, from sequences stored in a verified database, ensures reliability of sequences.

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Figure 1: Packaged peptides ready for shipment

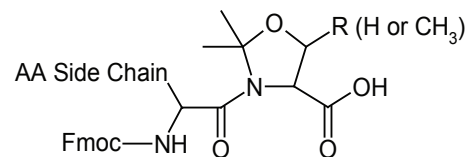


Figure 2: The pseudoproline structure

Peptides are then purified on automated preparative HPLC systems. After fractions are analyzed by LC and MS, only the best fractions are selected as final product.

A Quality Focus

Purified peptides are routinely assessed by analytical reverse phase HPLC (RP-HPLC), and are checked for correct identity by mass spectrometry (MS).

Mimotopes goes the extra mile to confirm the correctness of the peptide and its analytical data;

- Mimotopes uses electrospray mass spectrometry (ESMS),² a technique which was developed to allow the MS analysis of delicate biomolecules without causing breakdown. The high efficiency of ESMS in ionizing peptide molecules without damage also lends itself to quantitation via ion counting, a feature which Mimotopes puts to good use for the independent cross-checking of the validity of analytical HPLC data.
- Assigning a peptide purity value by RP-HPLC involves careful scrutiny of the elution profile of the peptide for signs of inhomogeneity. "Shoulders" are excluded from the calculation of the peptide's purity value, and LC/MS is used as a supplementary analytical tool for peptides with unusual chromatographic behaviour (e.g. peptides containing proline-proline bonds). Ion pairing analytical HPLC is used for highly charged peptides.

Documentation

Each peptide is shipped with a Certificate of Analysis (C. of A.) based on up-to-date analysis of the peptide.

The C. of A. includes details of the peptide, the quantity and purity supplied, and helpful information on the solubility of the peptide in the buffers used during purification. All purified peptides also include a printout of the analytical HPLC profile and electrospray MS data. Peptides are also shipped with 'A guide to handling peptides' and 'Interpreting the results of peptide analysis'.

Packaging

Mimotopes' peptides are packed under dry nitrogen gas to minimize oxidation or other types of degradation during shipment and storage.

After opening, we recommend peptides are stored dry in a freezer (details given in our technical guide to handling peptides; a copy is shipped with each peptide).

Quoting for Your Needs

Mimotopes offers an obligation-free consultative quote. We will help you choose the most appropriate peptide

Our Guarantee
AA sequence and analytical data as supplied are correct

Sequence Assessment
We analyze for practicality and report before accepting your order

Obligation Free Advice
We help design the best peptide for your application

Spectral Confirmation
MS supplied with all peptides
HPLC on all purified peptides

Full Confidentiality
All sequences are kept in the strictest confidence

sequence, purity and quantity for your needs, we will assess the sequence(s) for feasibility, and provide a quote from which you can choose your preferred specifications. In many cases, feedback provided to you on the feasibility of the candidate sequences can result in a better choice, e.g. a peptide which is:

- more stable,
- more soluble or
- more economical than the first candidate sequence.

Ordering

To request a quote, a peptide assessment, or to order, contact us by phoning, through the website, or by email/mail. Naturally we will need full information on sequences, amount and desired purity level(s), which in many instances will be finalized with you after a technical discussion with our experienced technical representatives. All sequence information will be kept strictly confidential.

Mimotopes has distributors appointed in a number of countries (see our website for details).

Your Success is our Reward

Mimotopes' support for your peptide based research does not stop when your products are shipped. We are always keen to see your research succeed, so feel welcome to contact us at any time through our support group (peptide_support_group@mimotopes.com).

Our regularly updated peptide publications database lets you draw on the combined experience of hundreds of satisfied peptide users. We value your feedback on peptide-related issues.

Additional Services

Mimotopes offers an efficient peptide-protein conjugation service, peptide-coated ELISA plates, peptide affinity purification of anti-peptide antibodies, and an epitope mapping service. Contact us for details.

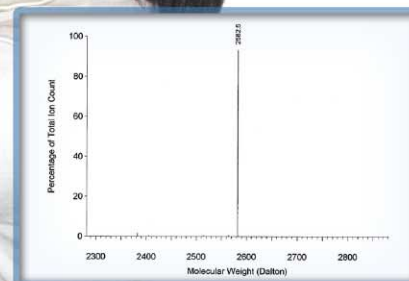
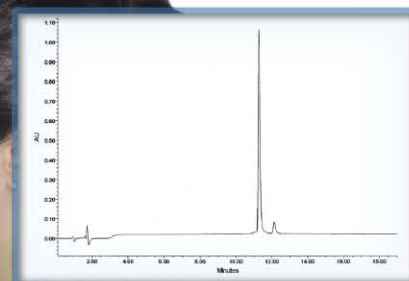
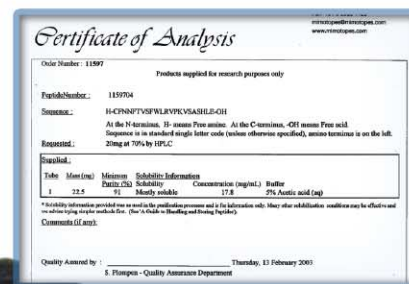
References

1. Sampson, W., Patsiouras, H. and Ede, N.J., *The Synthesis of 'Difficult' Peptides Using 2-Hydroxy-4-Methoxybenzyl or Pseudoproline Amino Acid Building Blocks: A Comparative Study*, *J. Peptide Sci.*, **5**, (1999), 403-409.

2. Alomirah, H.F., Alli, I., and Konishi, Y.J., *Applications of mass spectrometry to food proteins and peptides*, *J. Chromatogr. A.*, **893**, (2000), 1-21.

3. Smart, S.S., Mason, T.J., Bennell, P.S., Maeji, N.J. and Geysen, H.M., *High throughput purity estimation and characterisation of synthetic peptides by electrospray mass spectrometry*, *Int. J. Peptide Protein Res.*, **47**, (1996), 47-55.

4. Sereda T.J., Mant C.T., Hodges R.S., *Use of sodium perchlorate at low pH for peptide separations by reversed-phase liquid chromatography. Influence of perchlorate ion on apparent hydrophilicity of positively charged amino acid side-chains.*, *J. Chromatogr. A.*, Jul 25; **776(1)**, (1997), 153-65.



Fluorescent Labelling

Amidation

Cyclization

All types of Modifications

Succinylation

Biotinylation

Acetylation

Isotopic Labelling

Fatty Acid Capping

Branched Peptides

Phosphorylation

Mimotopes International
11 Duerdin St, Clayton
VIC, Australia 3162
service@mimotopes.com
www.mimotopes.com

Mimotopes Asia Pacific
Tel: +61 3 9565 1111
Fax: +61 3 9565 1199
australia@mimotopes.com

Mimotopes Europe
Tel: +44 870 460 1500
Fax: +44 870 460 1501
europe@mimotopes.com

Mimotopes US East
Tel: +1800 633 8161
Fax: +1800 424 3970
useast@mimotopes.com

Mimotopes US West
Tel: +1800 644 1866
Fax: +1800 655 1866
uswest@mimotopes.com