Peptide Library Service
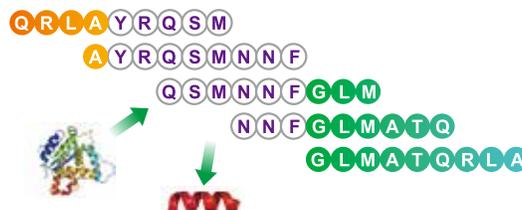
- Purified Peptide Library
- Micro-scale Peptide Library
- Crude Peptide Library
- Custom Peptide Pool
- Epitope Mapping
- Peptide Library Design Tools

Peptide Library Service ▸▸

Based on our advanced PepPower™ synthesis platform, GenScript offers a range of peptide libraries with strict QC services and one-stop downstream services, such as Epitope Mapping, binding assay, and so on to meet your research needs in structural biology, drug discovery and vaccine development.

- **Purified & Crude Peptide Library**
  Milligram level quantities and a wide range of purities for multiple applications

- **Micro-scale Peptide Library**
  Microgram quantities at reduced prices for preliminary screens or proteomics applications

Service Specifications

	Crude Peptide Library	Purified Peptide Library	Micro-Scale Peptide Library
Length	5-25 AA	5-25 AA	5-20 AA
Purity	Crude	>70%->98%	Crude, >70%
Quantity	Up to 20 mg	1-9 mg	0.2-0.5 mg
Turnaround time	3-4 weeks	3-4 weeks	3-4 weeks
Minimum order size	24 peptides	24 peptides	24 peptides
QC Services	TFA Removal, Solubility Testing, Endotoxin Control & Analysis, other QC services		/
Deliverable format	Lyophilized peptides in a 96-well plate or tube rack		
Quality documents	HPLC, MS, Certificate of Analysis for each peptide		
Modifications	Comprehensive: Acetylation, Amidation, Biotin, FITC, Phosphorylation and so on		

Delivery Specifications

- Typical peptide library deliverable consists of lyophilized unbound peptides in a 96-well plate or tube rack
- COA, MS and HPLC data

GenScript Peptide Library Advantages

- No cross-contamination: Peptides are supplied in individual well-labeled vials, 100% guaranteed no cross-contamination
- High-throughput capacity: >12,000 peptides/month
- Flexible purities options: Crude, >70% to >98%
- Comprehensive modifications: Acetylation, Amidation, Biotin and so on
- Competitive pricing: Most cost-efficient

Instant Online Quotations

To receive an instant quote go to **www.genscript.com** and click:

Peptide Services ❯ **Peptide Library** ❯ ✓ Get a Free Quote

Peptide Pooling Service

Pools of peptides representing immunostimulatory epitopes in HIV, HCV, influenza and other infectious diseases have proven useful for the stimulation of T-cells. GenScript can prepare customized peptide pools according to your customized specifications with pre-pooling LC-MS validation and post-pooling marker validation QC options to demonstrate that all peptides are present in a given pool.
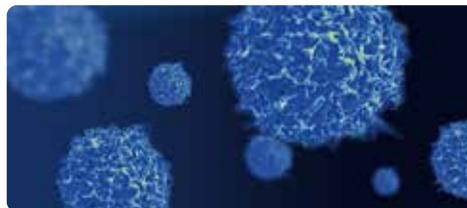
Service Specifications

- HPLC, MS and COA validation data for each peptide before pooling
- LC-MS on marker peptides (up to 8) to guarantee presence of all peptides within the final pool (upon request)
- Lyophilized peptides in specified pool(s) delivered in a 96-well plate or 100-tube rack
- Free aliquoting (up to 10 vials)

Epitope Mapping Service*

Epitope mapping is vital in both vaccine and antibody drug development and largely facilitates drug design and the preparation of patent applications.

Service Specifications

| Service Includes	Description	Delivery Time
Binding Activity Test	ELISA/WB confirms the binding of submitted antigen and antibody	4-6 weeks
Glycosylation Analysis (Optional)	Comparison of the antibody-antigen binding activity of deglycosylation antigen with the submitted antigen	
Overlapping Peptide Library	Overlapping peptides are synthesized according to the protein sequences provided by the customer	
Detection	Screening of peptide library against customer samples: control detection (optional) and target detection	

Key Features

- **Unparalleled accuracy:** Minimized unspecific interactions by optimized detection methods
- **Comprehensive services:** In-house peptide library synthesis and assay development
- **Fast delivery:** Delivery starting from 4 weeks

Complimentary to our peptide library service, GenScript provides 7 free peptide library design tools to support research projects from structural biology to vaccine development.

✓ Random Peptide Library
✓ Scrambled Peptide Library
✓ T-cell Truncated Peptide Library
✓ Overlapping Peptide Library

✓ Alanine Scanning Peptide Library
✓ Truncation Peptide Library
✓ Positional Scanning Peptide Library

Overlapping Peptide Library

Length=9
Offset=3
No.of peptides=6

Length=12
Offset=4
No.of peptides=4
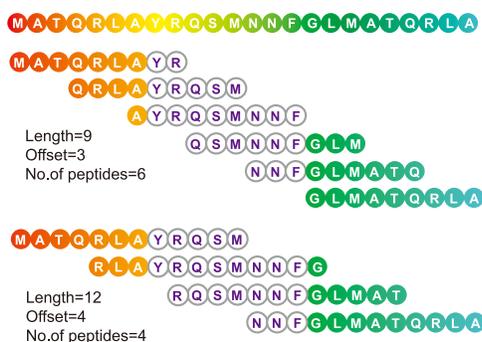
An overlapping peptide library can be used for linear or continuous epitope mapping, which reveals the parts of a given protein or peptide containing the essential amino acids that confer its activity, elicit immunogenicity, or bind to an antibody.The optimal peptide length for epitope mapping is 8 to 20 amino acids with an offset of 2-4 amino acids.

Applications

• Scan an antigen sequence for epitopes
• Screen a protein for a substrate
• Identify a T-cell epitope
• Stimulate T-cells in T-cell assays
• Map antibody epitopes
• Search for other binding sites within a given protein

An alanine scanning peptide library is designed to identify the key amino acid residues responsible for a peptide's binding function, stability and conformation. Alanine, the smallest chiral amino acid, is sequentially substituted for each non-alanine residue one at a time. Subsequently, corresponding changes in epitope activity can be measured.

Applications

• Identify key residues in epitopes
• Evaluation function property of enzymes
• Study binding sites of proteins

Positional Scanning Peptide Library
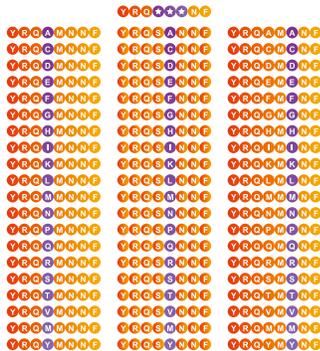

Truncation Peptide Library

A truncation peptide library allows researchers to determine the minimum length of an epitope required for activity. The library is generated through a systematic truncation of the peptide's sequence from each terminus. After the key residues have been identified via Alanine Scanning Library studies, truncation libraries can be used to determine the role of the sequences surrounding key residues.

Truncation library screening allows for the identification of peptides with enhanced proteolytic stability. It can serve as a tool to investigate the extent to which peptide drugs undergo metabolic degradation, which is a major consideration in bringing drugs to the market.

Applications

• Identify the minimal length of the epitope   • Map the minimal binding site of a protein for core binding

Positional Scanning Peptide Library

A positional scanning peptide library is an important tool for peptide sequence optimization. Amino acids of interest at a given position(s) are substituted with all other natural amino acids, one at a time. This allows for amino acids that enhance peptide activity to be identified.

Positional scanning libraries have been used to identify T-cell epitopes in complex mixtures of proteins, or to locate substrates with interdependent subsites with only minimum synthesis and screening.

Applications

- Optimize peptide binding sites
- Increase activity of enzyme substrates
- Enhance antibody epitopes
- Improve T-cell epitopes

A random peptide library is an indispensable tool for sequence optimization. It has the ability to generate a unique suite of peptides that have the potential for enhanced activities. Selected residues are randomly and simultaneously substituted with all of the other 20 natural amino acids via a shotgun approach.

Applications

- Peptide sequence optimization
- Target identification
- Drug discovery

Random Peptide Library
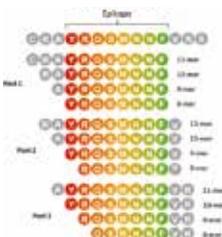

Scrambled Peptide Library

A scrambled peptide library has the highest variation of any peptide libraries . The library is constructed through sequence permutation of the original peptide.

Representing all possible alternative peptides, the scrambled library creates an ideal scenario for sequence optimization. It can be used to probe target molecules of interest including proteins, antibodies and DNA. Scrambled peptide libraries can also be used as negative controls.

Applications

- Screening proteins of interest
- Negative controls

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T-cell Truncated Peptide Library

A T-cell truncated peptide library is constructed to identify T-cell epitope. The T-cell epitopes are short peptide sequences, ranging from 8-11 amino acids in length on MHC I complexes and 15-24 amino acids on MHC II complexes. truncated peptide library is unique, in that it is composed of sequentially truncated peptide combinations, thereby ensuring that the entire T-cell epitope is spanned.

Applications

- Allow to test all possible T-cell epitopes across a protein of interest
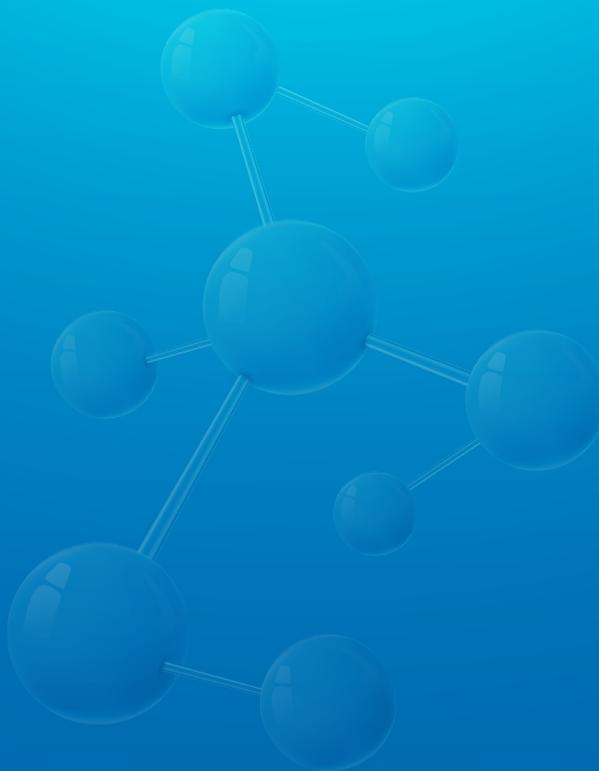
For more on peptide library design and free design tools visit:

www.genscript.com ❯ Peptide Services ❯ Peptide Library ❯ Design Library

Quotations and Ordering:

Peptide Library Online Quotation: https://www.genscript.com/quick_order/peptide_library

peptide@genscript.com

1-877-436-7274 (Toll-Free)
1-732-885-9188

1-732-210-0262
1-732-885-5878