Syntrex Research

Semaglutide

Semaglutide is a 31-amino acid synthetic peptide analog manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to support high sequence fidelity, molecular consistency, and reproducible batch quality. The molecule incorporates strategically engineered amino acid substitutions together with site-specific molecular modifications, producing a chemically defined peptide architecture distinct from the native sequence. Following synthesis, the material is purified using High-Performance Liquid Chromatography (HPLC) before controlled lyophilization to preserve physicochemical integrity, compositional consistency, and analytical stability for laboratory research applications.

Each production batch undergoes comprehensive analytical characterization to verify molecular identity, chromatographic purity, peptide content, and overall physicochemical quality prior to final release. Standardized manufacturing controls support batch-to-batch reproducibility throughout synthesis, purification, and final preparation. Every lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a well-characterized research material suitable for controlled scientific investigation.

Tirzepatide

Tirzepatide is a 39-amino acid synthetic peptide analog produced using precision Solid-Phase Peptide Synthesis (SPPS) under controlled manufacturing parameters designed to ensure high sequence fidelity, molecular consistency, and reproducible batch quality. The peptide contains engineered sequence modifications and a covalently attached fatty diacid moiety, forming a chemically defined molecular architecture distinct from endogenous peptide sequences. Following synthesis, the material undergoes purification using High-Performance Liquid Chromatography (HPLC) before controlled lyophilization to maintain structural integrity, compositional uniformity, and analytical consistency throughout production.

Each manufacturing lot is evaluated through molecular identity confirmation, chromatographic purity assessment, peptide content verification, and physicochemical quality review prior to release. Standardized production controls are implemented to support reliable batch-to-batch reproducibility and consistent analytical performance. Every lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability for scientific and analytical laboratory research.

Retatrutide

Retatrutide is a 39-amino acid synthetic peptide analog manufactured by precision Solid-Phase Peptide Synthesis (SPPS) using controlled production parameters designed to achieve high sequence fidelity, molecular consistency, and reproducible manufacturing quality. The peptide incorporates engineered amino acid substitutions together with site-specific molecular modifications, resulting in a chemically defined peptide structure with a consistent analytical profile. Following synthesis, the material is purified using High-Performance Liquid Chromatography (HPLC) and lyophilized under controlled conditions to preserve physicochemical integrity and compositional consistency.

Every production batch undergoes analytical characterization to verify molecular identity, chromatographic purity, peptide content, and overall physicochemical quality prior to release. Manufacturing and purification procedures are standardized to support batch-to-batch reproducibility and formulation reliability. Each lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a thoroughly characterized material for laboratory research and analytical applications.

NAD+

Nicotinamide Adenine Dinucleotide (NAD+) is a chemically defined pyridine nucleotide composed of adenine, nicotinamide, ribose, and phosphate-associated structural components. Unlike peptide-based research materials, NAD+ does not contain an amino acid sequence and is manufactured through controlled chemical production processes designed to achieve compositional purity, molecular consistency, and physicochemical integrity. Following production, the material is purified using

High-Performance Liquid Chromatography (HPLC) before controlled lyophilization to preserve analytical stability and product consistency.

Each production lot undergoes comprehensive analytical characterization to verify molecular identity, chromatographic purity, assay content, and overall physicochemical quality prior to release. Standardized quality control procedures support batch-to-batch reproducibility and consistent chemical composition throughout production. Every lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a well-characterized nucleotide reference material for scientific and analytical laboratory research.

MOTS-C

MOTS-C is a 16-amino acid synthetic mitochondrial-derived peptide (MDP) manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to achieve high sequence fidelity, molecular consistency, and reproducible batch quality. Originally identified as a peptide encoded within the mitochondrial 12S ribosomal RNA region, the synthetic material is produced as a chemically defined peptide sequence and purified using High-Performance Liquid Chromatography (HPLC). Controlled lyophilization is then performed to preserve physicochemical integrity, compositional consistency, and analytical stability.

Each production batch undergoes comprehensive analytical characterization to verify molecular identity, chromatographic purity, peptide content, and overall physicochemical quality prior to release. Manufacturing controls are designed to support consistent batch-to-batch reproducibility from synthesis through final packaging. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a thoroughly characterized peptide material for scientific and analytical laboratory investigations.

GHK-Cu

GHK-Cu is a synthetic copper tripeptide complex consisting of the naturally occurring amino acid sequence glycyl-L-histidyl-L-lysine (GHK) coordinated with divalent copper (Cu^{2+}) ions to form a chemically defined metallopeptide. Composed of three amino acids, the peptide component is manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to support sequence fidelity and molecular consistency prior to copper complexation. Following synthesis, the peptide undergoes purification using High-Performance Liquid Chromatography (HPLC) before controlled metal coordination and lyophilization.

Each production batch undergoes comprehensive analytical characterization to verify molecular identity, chromatographic purity, peptide content, copper complex integrity, and overall physicochemical quality prior to release. Standardized manufacturing controls support reproducible complex formation and consistent batch quality. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a well-characterized metallopeptide reference material for scientific and analytical laboratory research.

Tesamorelin

Tesamorelin is a 44-amino acid synthetic peptide analog manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to achieve high sequence fidelity, molecular consistency, and reproducible batch quality. Structurally derived from the endogenous human growth hormone-releasing hormone (GHRH) peptide sequence, Tesamorelin incorporates targeted amino acid modifications that produce a chemically defined molecular architecture while maintaining analytical consistency throughout the manufacturing process. Following synthesis, the peptide is purified using High-Performance Liquid Chromatography (HPLC) before controlled lyophilization.

Each production batch undergoes analytical characterization to verify molecular identity, chromatographic purity, peptide content, and overall physicochemical quality prior to release. Standardized synthesis and purification controls support consistent batch-to-batch reproducibility and product quality. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a thoroughly characterized research material for scientific and analytical laboratory investigations.

CJC-1295 (No DAC) / Ipamorelin

This dual-peptide formulation combines CJC-1295 (No DAC), a 29-amino acid synthetic peptide analog commonly associated with the modified GHRH 1-29 sequence, with Ipamorelin, a 5-amino acid synthetic pentapeptide. Each peptide is independently manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to ensure sequence fidelity, molecular consistency, and reproducible batch quality. Following synthesis, both components are purified using High-Performance Liquid Chromatography (HPLC) prior to formulation into a chemically defined lyophilized preparation.

Each production batch undergoes analytical characterization to verify the molecular identity of both peptide components, chromatographic purity, peptide content, formulation consistency, and overall physicochemical quality prior to release. Independent component verification supports compositional accuracy and batch-to-batch reproducibility. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a thoroughly characterized dual-peptide material for analytical and laboratory research applications.

BPC-157 / TB-500

This dual-peptide formulation combines BPC-157, a 15-amino acid synthetic peptide fragment, with TB-500, a 43-amino acid synthetic peptide corresponding to the active region of the naturally occurring thymosin beta-4 protein. Each peptide is independently manufactured using precision Solid-Phase Peptide Synthesis (SPPS) under controlled production parameters designed to ensure high sequence fidelity, molecular consistency, and reproducible batch quality. Following synthesis, both peptide components are purified using High-Performance Liquid Chromatography (HPLC) before formulation into a chemically defined lyophilized preparation.

Each production batch undergoes comprehensive analytical characterization to verify the molecular identity of both peptide components, chromatographic purity, peptide content, formulation consistency, and overall physicochemical quality prior to release. Standardized manufacturing and formulation controls support reproducible batch quality and compositional uniformity. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a well-characterized dual-peptide material for scientific and analytical laboratory investigations.

BPC-157 / TB-500 / GHK-Cu / KPV

This multi-component peptide formulation combines BPC-157, a 15-amino acid synthetic peptide fragment; TB-500, a 43-amino acid synthetic peptide corresponding to the active region of thymosin beta-4; GHK-Cu, a synthetic copper-coordinated tripeptide complex composed of glycyl-L-histidyl-L-lysine; and KPV, a 3-amino acid synthetic tripeptide consisting of the lysine-proline-valine sequence. Each peptide component is independently manufactured using precision Solid-Phase Peptide Synthesis (SPPS) and purified using High-Performance Liquid Chromatography (HPLC) prior to formulation into a chemically defined lyophilized preparation.

Each production batch undergoes comprehensive analytical characterization to verify the molecular identity of all peptide components, chromatographic purity, peptide content, formulation consistency, copper complex integrity, and overall physicochemical quality prior to release. Independent component verification and standardized formulation controls support compositional accuracy and batch-to-batch reproducibility. Every production lot is accompanied by a batch-specific Certificate of Analysis (COA) documenting analytical verification, quality control review, and complete manufacturing traceability, providing a thoroughly characterized multi-peptide material for scientific and analytical laboratory research.