



PRODUCT CATALOG



BODY PROTECTIVE COMPOUND 157

BPC-157: An Overview

Body Protective Compound 157, commonly abbreviated as BPC-157, is a naturally occurring 15-amino-acid peptide endogenously secreted in human gastric juice. Initially recognized for its core role in maintaining gastric mucosal integrity and systemic homeostasis, this peptide has gained significant attention in recent decades for its broad cytoprotective, regenerative, and anti-inflammatory properties, with emerging potential in orthopaedic sports medicine and tissue repair.

Core Mechanisms of Action

BPC-157 exerts its biological effects through the modulation of multiple key cellular and molecular pathways, driving tissue repair and reducing inflammatory damage:

Angiogenesis & Cell Proliferation: It upregulates the expression of vascular endothelial growth factor (VEGF) to stimulate blood vessel formation, critical for nutrient and oxygen supply in injured tissues. BPC-157 also activates pro-survival and proliferative signaling pathways (ERK1/2, AKT, KRAS), enhances growth hormone receptor expression, and boosts the activity of the FAK-paxillin pathway, promoting cell migration, adhesion, and survival—especially for tendon fibroblasts and musculoskeletal progenitor cells.

Anti-Inflammatory Effects: The peptide suppresses the production of pro-inflammatory mediators, including cyclooxygenase-2 (COX-2), interleukin-6 (IL-6), tumor necrosis factor-alpha (TNF- α), and myeloperoxidase (MPO), effectively reducing inflammatory infiltration in damaged tissues.

Vascular Regulation: It upregulates nitric oxide synthase (NOS) expression and nitric oxide (NO) production, improving vasodilation and tissue perfusion. Additionally, BPC-157 modulates dopamine and serotonin pathways, which may contribute to neuroprotective effects and pain modulation.

Organ & Tissue Protection: Beyond the gastrointestinal tract, it exhibits cytoprotective effects in the liver, heart, kidneys, nerves, and musculoskeletal system, with preclinical evidence of hepatoprotective and anti-apoptotic properties. Organ & Tissue Protection: Beyond the gastrointestinal tract, it exhibits cytoprotective effects in the liver, heart, kidneys, nerves, and musculoskeletal system, with preclinical evidence of hepatoprotective and anti-apoptotic properties.

Musculoskeletal Repair Potential (Preclinical Dominant Evidence)

Most research on BPC-157's therapeutic potential focuses on preclinical studies (animal and cell models), which demonstrate robust efficacy in repairing various musculoskeletal injuries:

Muscle injuries: Improves structural integrity, biomechanical strength, and functional recovery in models of muscle transection, crush injury, and corticosteroid-impaired muscle healing, reducing atrophy and subcutaneous tissue damage.

Tendon & ligament injuries: Accelerates the healing of Achilles, quadriceps, and other tendons, enhances tendon-bone junction repair, and restores the biomechanical properties of ligaments (e.g., medial collateral ligament). It also boosts tendon fibroblast outgrowth and stress resistance in vitro.

Bone injuries: In rabbit nonunion models, BPC-157 promotes callus mineralization and lamellar bone formation, with repair efficacy comparable to autologous bone marrow injection or autologous bone grafting.

Arthritis & joint injury: Reduces joint swelling, nodule formation, and stiffness in experimental inflammatory arthritis models, and alleviates chronic joint pain in preliminary clinical observations.

A single retrospective clinical study noted that 7 out of 12 patients with chronic knee pain reported sustained symptom relief for over 6 months after intra-articular BPC-157 injection, but large-scale, randomized controlled clinical trials (RCTs) remain lacking to validate these findings.



BODY PROTECTIVE COMPOUND 157

Pharmacokinetics & Metabolism

Metabolism & Excretion: BPC-157 is primarily metabolized in the liver via the cytochrome P450 enzymatic system and excreted through the kidneys. It accumulates at the highest concentrations in the kidneys and liver, with detectable levels in bile.

Half-life: It has a short in vivo half-life of less than 30 minutes, following linear pharmacokinetic characteristics after intramuscular, intravenous, or oral administration.

Detection: Its stable metabolites can be detected in human urine for 4–5 days using high-resolution mass spectrometry, with a low limit of detection (0.03–0.11 ng/mL), well below the World Anti-Doping Agency (WADA)'s minimum testing threshold (2 ng/mL).

Safety Profile

Preclinical safety: Extensive preclinical studies in rats and dogs (doses ranging from 6 µg/kg to 20 mg/kg, administered for up to 6 weeks via multiple routes) show no acute toxicity, mutagenicity, genotoxicity, or teratogenicity in major organs (liver, kidney, brain, heart, reproductive system). It also exhibits mild hepatoprotective effects in models of induced liver injury and causes no local irritation at injection sites.

Clinical risks & limitations: There is a complete lack of long-term human safety data due to the absence of formal clinical trials. BPC-157 products are often sold as unregulated "dietary supplements" or "research chemicals," with 12%–58% of similar ergogenic supplements reported to contain contaminants. Anecdotal user reports include adverse effects such as injection-site pain/swelling, joint pain, anxiety, palpitations, and insomnia, likely linked to contamination or off-target pathway modulation.

Regulatory Status & Clinical Use

BPC-157 has no U.S. Food and Drug Administration (FDA) approved clinical indications and was classified as a Category 2 bulk drug substance by the FDA in 2023 (indicating significant uncharacterized safety risks and a ban on pharmaceutical compounding).

It is explicitly prohibited by WADA, the NFL, UFC, and other major professional and collegiate sports organizations (since 2022) due to its potential performance-enhancing effects. Other leagues (NBA, MLB, NCAA) ban it under general prohibitions on peptide hormones and performance-enhancing drugs (PEDs).

Despite regulatory restrictions, it is widely used off-label by clinicians for intra-articular injections and by athletes for musculoskeletal injury recovery, with easy online access and surging public interest (peak Google search volume in 2024 and over 50 million views of related social media content).

Future Perspectives

BPC-157 represents a promising candidate for musculoskeletal tissue repair, supported by robust preclinical evidence of its regenerative, anti-inflammatory, and angiogenic properties. However, its clinical translation is hindered by the lack of large-scale RCTs to confirm efficacy, establish optimal dosing/administration routes, and characterize long-term human safety. Additionally, the unregulated nature of commercial BPC-157 products poses significant health risks, highlighting the need for stricter quality control and regulatory oversight. Future research should prioritize well-designed clinical studies to validate its therapeutic potential and address critical safety gaps.

NICOTINAMIDE ADENINE DINUCLEOTIDE

Descriptions of NAD

Clinical Findings and Usage Parameters

A recent randomized, double-blinded, placebo-controlled pilot study (NCT06382688) provides the first clinical evaluation of intravenous NAD⁺ in healthy adults. This study offers critical data on the safety, tolerability, and efficacy of injectable NAD⁺.

Safety and Tolerability

Infusion Time: A single 500 mg dose of IV NAD⁺ required a slow infusion rate to maintain tolerability. The mean tolerable infusion time was long, with participants requiring a significantly slower administration speed.

Adverse Events: IV NAD⁺ administration was associated with more frequent and more severe adverse experiences during the infusion compared to placebo.

Biomarkers: Clinically, IV NAD⁺ led to a measurable increase in white blood cells and neutrophils, suggesting a potential inflammatory response to the infusion.

Efficacy (NAD⁺ Boosting)

Blood Levels: In the pilot study, a 500 mg dose of IV NAD⁺ successfully raised whole-blood NAD⁺ levels in participants. However, the magnitude of this increase was less than that observed with other intravenous precursor formulations at the same milligram dose.

Formulation and Dosage Considerations

Pharmaceutical Grade: For research and clinical applications, pharmaceutical-grade NAD⁺ lyophilized powder is required. In the cited clinical trial, vials containing NAD⁺ were prepared in sterile water by a compounding pharmacy.

Dosage (Clinical Protocol): The acute dose evaluated in the pilot study was 500 mg. For administration, this dose was added to 500 ml of normal saline (0.9% sodium chloride injection, USP) that was preservative-free.

Infusion Protocol: The infusion protocol for IV NAD⁺ is adjusted based on patient tolerability. In the study, the IV line was started, and the rate was decreased upon participant request to manage tolerability and determine the maximum tolerable rate.

Summary and Evidence Status

While the biological activity of NAD⁺ is well-established in preclinical models, human clinical evidence for injectable NAD⁺ is limited.

Biological Rationale: NAD⁺ is a critical coenzyme for energy metabolism and a substrate for key enzymes involved in cellular repair and survival.

Clinical Activity: Intravenous administration of NAD⁺ can elevate blood levels of the coenzyme.

Clinical Limitations: The need for slow infusion rates, the potential for adverse effects, and observed changes in inflammatory markers highlight the challenges associated with direct IV NAD⁺ administration.

Gap in Evidence: No eligible outcomes trials have evaluated IV NAD⁺ for FDA-approved anti-aging or wellness indications. Larger studies with long-term follow-up are required to validate therapeutic efficacy.

PharmaC
Direct

NAD

CAS #: 53-84-9

M.W.: 663.43

Formula: C₂₁H₂₇N₇O₁₄P₂**PURITY** 99% HPLC**RUO** Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



NICOTINAMIDE ADENINE DINUCLEOTIDE

Functional of NAD

Biological Activity

NAD⁺ is a fundamental and ubiquitous coenzyme found in all living cells, where it serves dual, critical functions in cellular homeostasis.

Redox Metabolism: NAD⁺ is essential for cellular respiration and energy production. It acts as a critical electron carrier in metabolic pathways that fulfill bioenergetic demands, including glycolysis, the tricarboxylic acid (TCA) cycle, and fatty acid oxidation.

Enzymatic Substrate: Beyond its role in metabolism, NAD⁺ functions as a consumable substrate for several key enzyme families that regulate cellular health and aging:

Sirtuins: Regulate gene expression, metabolism, and stress responses.

Poly (ADP-ribose) polymerases (PARPs): Involved in DNA damage repair.

CD38: An enzyme involved in calcium signaling and intercellular communication.

Mechanism of Action

The mechanism of action for intravenously administered NAD⁺ is distinct from that of its precursors.

Extracellular Processing: As a pyridine nucleotide, the NAD⁺ molecule itself is too large and charged to cross the cell membrane via direct uptake. Exogenous NAD⁺ administered intravenously is rapidly hydrolyzed in the extracellular environment into smaller metabolites, such as nicotinamide and ADP-ribose.

Cellular Uptake and Resynthesis: These smaller metabolites can then be taken up by cells. Once inside, they must be resynthesized back into NAD⁺ via intracellular salvage pathways. This indirect process is metabolically less efficient than the direct utilization of precursors.

Potential Signaling Effects: Raising extracellular NAD⁺ to supraphysiological levels via intravenous administration may itself have biological effects. Some preclinical evidence suggests that high extracellular NAD⁺ concentrations can provoke inflammatory signaling pathways.

RETATRUTIDE (LY3437943)

Descriptions of Retatrutide

Retatrutide (development code LY3437943) is a first-in-class, synthetic peptide designed as a triple hormone receptor agonist. It represents the next frontier in incretin-based therapies, building on the success of dual agonists like tirzepatide by adding a third mechanism of action to potentially unlock unprecedented levels of efficacy.

Retatrutide is an advanced medication which suppresses appetite leading to significant weight loss. It does this by mimicking the effects of the GLP-1, GIP and glucagon receptors, which are natural hormones that makes humans feel full from eating much smaller portions of food.

Mechanism: Triple GIP, GLP-1, and Glucagon (GCG) receptor agonist;

Molecular Target: Simultaneously activates receptors for Glucose-dependent Insulinotropic Polypeptide (GIP), Glucagon-like Peptide-1 (GLP-1), and Glucagon (GCG).

Key Property: Designed for once-weekly subcutaneous injection, with a unique receptor activity profile to maximize metabolic benefits.

Stability Testing

Thermal, Enzymatic, and Oxidative Degradation Studies

Evaluate peptide stability under heat, enzymatic activity, and oxidative stress to understand degradation pathways and ensure product reliability.

Shelf-Life Evaluation & Formulation Robustness

Determine product stability over time under various storage conditions to establish shelf life and ensure consistent performance.

Formulation Development

Design optimized peptide formulations that enhance solubility, bioavailability, and structural integrity, tailored for injectable, topical, and research-grade applications.

Excipient Compatibility Testing

Assess interactions between peptides and inactive ingredients to ensure safety, stability, and overall formulation performance.

Protease Resistance Evaluation

Analyze peptide susceptibility to enzymatic degradation to support the development of more stable and durable peptide products.

Encapsulation & Carrier Systems

Develop delivery systems such as liposomes, microspheres, and other carriers to protect peptides and enable controlled or sustained release.

Administration Route Assessment

Evaluate formulation suitability for different delivery routes (e.g., injectable, topical, or other methods) to optimize therapeutic effectiveness and stability.

Optimized for:

- Parenteral delivery (injectables)
- Dermal absorption (cosmetic/topical)
- In vitro research applications

Functional

Retatrutide's novel triple mechanism and its profound effects in clinical trials have positioned it as a potential "game changer" in obesity pharmacotherapy.

Mechanism of Action: Retatrutide is a synthetic peptide that potently activates three key receptors involved in metabolism:

GIP (Glucose-dependent Insulinotropic Polypeptide) Receptors: It is engineered to be 8.9 times more potent at the GIP receptor than the natural hormone, which enhances insulin secretion and sensitivity.



RETATRUTIDE (LY3437943)

GLP-1 (Glucagon-like Peptide-1) Receptors: It activates GLP-1 receptors (0.4 times the potency of native hormone), which increases satiety, slows gastric emptying, and boosts insulin secretion.

Glucagon (GCG) Receptors: This is the key differentiator. By activating glucagon receptors (0.3 times native potency), retatrutide is believed to increase energy expenditure, in addition to reducing calorie intake, leading to greater weight loss than GLP-1 or dual GIP/GLP-1 agonists alone.

Targeted Indications: Retatrutide is being investigated for:

- Chronic Weight Management in adults with obesity or overweight .
- Treatment of Type 2 Diabetes to improve glycemic control .
- Treatment of Obesity-Related Complications, including obstructive sleep apnea (OSA) and knee osteoarthritis (OA).

Clinical Efficacy & Key Trial Results: Retatrutide's efficacy is being evaluated in the extensive phase 3 TRIUMPH clinical program, which has over 5,800 participants . Results have been striking.

Weight Loss: In the phase 2 obesity trial, the 12 mg dose led to an average weight loss of 24.2% at 48 weeks .

Preliminary results from the phase 3 TRIUMPH-4 trial (in people with obesity and knee OA) showed even greater efficacy at 68 weeks: participants on the 12 mg dose lost an average of 28.7% of their body weight (approximately 71 lbs / 32.3 kg), compared to 2.1% with placebo . Furthermore, 23.7% of participants achieved $\geq 35\%$ weight loss.

Glycemic Control: In a phase 2 trial for type 2 diabetes, retatrutide significantly reduced HbA1c by up to 2.16% at 36 weeks, which was superior to the active comparator dulaglutide . A systematic review confirmed significant HbA1c reductions, with a notable dose-response pattern.

Knee Osteoarthritis: In TRIUMPH-4, retatrutide significantly reduced knee pain. The 9 mg dose reduced pain scores by an average of 4.5 points (on the WOMAC scale), compared to a 2.4-point reduction with placebo . A post-hoc analysis found that up to 14.1% of participants reported being completely free of knee pain at 68 weeks.

Cardiometabolic Markers: The drug also improved cardiovascular risk markers, including reductions in non-HDL cholesterol, triglycerides, and high-sensitivity C-reactive protein. The 12 mg dose lowered systolic blood pressure by an average of 14.0 mmHg.

THYMOSIN BETA-4

Biogenix TB-500, or Thymosin Beta-4 Functional

Accelerated tissue healing:

supports healing and recovery in muscles, tendons, ligaments, and skin by stimulating cell growth and repair processes.

Faster wound healing:

Helps in the formation of new blood vessels and supports the migration of cells to the affected area, speeding up the healing process.

Anti-inflammatory:

Reduces inflammation, potentially alleviating discomfort and facilitating the healing process in affected areas.

Post-injury recovery:

assists in the repair of damaged muscles and tissues after injuries, leading to quicker and more efficient recovery and restoration of functionality.

Improved Flexibility:

By aiding in tissue repair, it helps increase flexibility in affected areas, supporting better range of motion, better mobility and reduced stiffness.

Supports muscle growth and endurance by encouraging cellular regeneration and protein synthesis.

How:

TB-500 is typically administered via subcutaneous or intramuscular injection using an insulin syringe.

Duration:

Each cycle is 8 to 12 week, followed by 4 weeks break, repeating as needed until injury is healed.

Dosage:

For men: 0.02mg – 0.04 mg / lb bodyweight per week, dosage split into 2 injections per week.

For women: 0.015mg- 0.03 mg / lb bodyweight per week, dosage split into 2 injections per week

Examples: 140 lb woman would use 2 to 4 mg/week split into 2 injections, so 1-2mg / injection, twice a week
200 lb man would use 4 to 8 mg/week, split into 2 injections, so 2-4mg / injection, twice a week

Note:

Your TB-500 solution will have a concentration of 0.5mg/10 units (10mg/200units) if prepared as above.

TB-500 is often stacked with BPC-157 and GHK-Cu to enhance healing and recovery, as the combined effects of these peptides can promote optimal tissue repair and anti-inflammatory benefits. This stacked often referred to as “The Wolverine Stack”.

PharmaC
Direct

TB-500

CAS #: 77591-33-4

Formula: $C_{38}H_{68}N_{10}O_{14}$

M.W.: 4963.4408g/mol

PURITY 99% HPLC

RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



GHK-C

Biogenix GHK-Cu is a synthetic tri-peptide bound to copper, naturally found in blood plasma, saliva, and urine. It offers therapeutic benefits in skincare and wound healing, particularly in anti-aging products by enhancing skin firmness, elasticity, and appearance. GHK-Cu promotes collagen and elastin production, and aids in tissue repair and regeneration. It can also be stacked with TB500 and BPC 157 for an optimal injury healing cycle.

Setting the Gold Standard in Analytical Testing Compounds

How we are different:

- Partner with U.S.-based, ISO/IEC 17025-accredited third-party analytical laboratories.
- Produced in a facility with GMP-aligned quality systems.
- ≥99% purity reported per lot.
- Endotoxin and microbial contamination (sterility) testing performed and reported per lot.
- Elemental impurity screening (heavy metals) reported per lot.
- Fast, responsive customer support.

Functional

Skin repair and regeneration: stimulates collagen and elastin production, essential proteins for skin structure and elasticity. Helps reduce the appearance of fine lines and wrinkles.

Antioxidant properties: helps neutralize free radicals, reducing oxidative stress, and protects the skin from UV radiation and pollution.

Wound and scar healing: accelerates the wound healing process by promoting the formation of new blood vessels and signals tissue remodeling, removing damaged/scarred tissue and generating new, healthy tissue.

Anti-inflammatory effects: helps reduce inflammation in the skin and soothes irritation or redness.

Brain and nervous system health: counters the age-related decline in neuron function due to degenerative diseases like Alzheimer's, boosts nerve outgrowth and reduces inflammation in the nervous system.

Hair growth: stimulates hair follicles and enhances blood circulation to the scalp, promoting hair growth and thickness.

DOSE AND TIMING: Common dosages are 1-2mg per day, injected once daily.

CYCLE DURATION: Typical cycle length is 30 days, but it can be safely taken for up to 3 consecutive months, followed by a break of 3-6 months. Typical usage of GHK-Cu would be 1-2 cycles per year.

(Note: your solution will have a concentration of 50mg/250 units (2mg/10units) if prepared as above. Each vial will last you 25 days if using 2mg/day.)



GHK-Cu

CAS #: 89030-95-5
Formula: $C_{14}H_{25}CuN_6O_4$
M.W.: 340.384 g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



BREMELANOTIDE

Physical Form – Lyophilized powder

PT-141, also known as Bremelanotide, is a synthetic melanocortin receptor agonist that acts centrally to regulate sexual desire and arousal.

Basic Information

- CAS No.: 189691-06-3
- Molecular Formula: $C_{50}H_{68}N_{14}O_{10}$
- Molecular Weight: 1025.16 g/mol
- Sequence: Ac-Nle-Asp-His-d-Phe-Arg-Trp-Lys-OH
- Form: Lyophilized powder
- Typical research grade: 10 mg/vial

Mechanism of Action

- Targets: MC3R and MC4R receptors in the hypothalamus
- Acts on the central nervous system to modulate sexual desire and arousal
- Mechanism is independent of vasodilation, different from PDE5 inhibitors

Specification

Setting the Gold Standard in Analytical Testing Compounds

How we are different

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- Elemental impurity screening (heavy metals) reported per lot
- Fast, responsive customer support

Additional Information

Sexual Function Support: PT-141 (Bremelanotide) is a melanocortin receptor agonist shown to enhance sexual desire and performance in male and female preclinical models by acting directly on the central nervous system.

Non-Hormonal Mechanism: Works via neural pathways rather than the vascular nitric oxide system, showing potential effectiveness even in cases unresponsive to PDE5 inhibitors.

Female Libido Research: Preclinical and clinical research indicates improvements in conditions such as hypoactive sexual desire disorder (HSDD).

Rapid Onset: Research settings report onset of activity within hours, with potential benefits lasting up to 72 hours.

Emerging Applications: Under investigation for potential effects on mood, appetite control, and neuroprotection through melanocortin pathway modulation.

PharmaC
Direct**PT141**

CAS #: 189691-06-3
Formula: $C_{50}H_{68}N_{14}O_{10}$
M.W.: 1025.182 g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



SELANK

Descriptions

Biogenix Selank is a synthetic peptide primarily known for its anxiolytic (anti-anxiety) and nootropic (cognitive-enhancing) properties. It is derived from the naturally occurring peptide tuftsin and is often researched for its potential effects on mood, cognition, and stress.

Functional

Anxiety Reduction: Selank is known for its anxiolytic effects, helping to alleviate symptoms of anxiety without the sedative effects associated with many traditional medications.

Cognitive Enhancement: It may improve cognitive functions such as memory, attention, and learning capacity.

Mood Stabilization: Users often report improved mood and emotional stability.

Neuroprotective Effects: Some studies suggest that Selank may help protect neurons and promote neurogenesis (the growth of new neurons).

Stress Resistance: It may enhance the body's response to stress and improve resilience to stressful situations.

Typical Dosage: 250 mcg to 500 mcg per administration, depending on individual response and goals.

Administration: Selank is typically administered subcutaneous injection.

Frequency: It can be taken 1 to 3 times per day. For general anxiety relief or cognitive enhancement, once or twice a day may suffice, while more frequent use (up to three times daily) might be used for acute stress or mood improvement.

Side Note: The dosing schedule can be adjusted based on personal needs and how the body responds over time.

PharmaC
Direct

Selank

CAS #: 129954-34-3
Formula: $C_{33}H_{57}N_{11}O_9$
M.W.: 751.887g/mol

PURITY 99% HPLC
RUO Research use only



SEMAX

Functional

Cognitive Enhancement

Semax is a synthetic peptide derived from adrenocorticotrophic hormone (ACTH) fragment (ACTH 4-10). Demonstrates neuroprotective and nootropic properties in various neurological models. Shown to improve learning, memory retention, attention span, and adaptability under stress.

Mood Regulation & Stress Resilience

- Regulates dopamine and serotonin activity in the brain.
- Offers potential antidepressant-like effects and mood stabilization without sedation or dependency.
- Helps reduce symptoms of anxiety and mental fatigue in high-stress environments.

Neuroprotection & Recovery

Enhances expression of brain-derived neurotrophic factor (BDNF) and supports nerve regeneration. Promotes faster recovery from traumatic brain injury, ischemic stroke, and cognitive decline in animal models.

Anti-Inflammatory Action

Exhibits immunomodulatory effects by inhibiting pro-inflammatory cytokines. May support central nervous system health by reducing neuroinflammation.

Ocular & Vision Research

Emerging studies explore its potential to protect retinal nerves and support optic nerve health.



Semax

CAS #: 80714-61-0
Formula: $C_{39}H_{54}N_{10}O_{10}S$
M.W.: 854.99 g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



CJC-1295

Functional

Research Highlights:

Long-Acting GH Secretagogue

CJC-1295 DAC binds to albumin via DAC technology, significantly extending its biological half-life. Provides sustained increases in Growth Hormone (GH) and IGF-1 levels over several days.

Muscle Growth & Recovery

Stimulates natural GH pulsatility, promoting lean muscle growth, improved protein synthesis, and enhanced recovery. Often studied in conjunction with GHRPs (like Ipamorelin or GHRP-2) for synergistic effects.

Fat Loss & Metabolism Support

Boosts metabolic rate and enhances lipolysis (fat burning), especially during cutting or body recomposition cycles. Improved insulin sensitivity and nutrient partitioning reported in models.

Anti-Aging & Regenerative Effects

Elevated GH and IGF-1 levels linked to improved skin elasticity, joint repair, sleep quality, and overall vitality. Studied for potential benefits in age-related decline and GH deficiency syndromes.

Sleep & Cognitive Benefits

GH pulses during deep sleep are enhanced, supporting better rest, memory consolidation, and mood stability. Research shows neuroprotective benefits via IGF-1 pathways in animal models.



CJC1295

CAS #: 863288-34-0
Formula: $C_{1522}H_{252}N_{44}O_{42}$
M.W.: 3367.89688 g/mol

PURITY 99% HPLC
RUO Research use only



TIRZEPATIDE

Description

Tirzepatide is a dual agonist of glucagon-like peptide-1 (GLP-1) and glucose-dependent insulinotropic polypeptide (GIP) receptors.

Improves glycemic control in a glucose-dependent manner.

Reduces appetite, enhances satiety, and promotes significant weight loss.

Improves lipid profiles and metabolic markers.

Approved Indications

Type 2 diabetes mellitus

As an adjunct to diet and exercise for glycemic control in adults.

Chronic weight management

Adults with obesity ($\text{BMI} \geq 30 \text{ kg/m}^2$)

Adults with overweight ($\text{BMI} \geq 27 \text{ kg/m}^2$) with at least one weight-related comorbidity

Dosage and Administration

Dosing is initiated at a low level and titrated gradually to improve tolerability.

Usual maintenance doses range from 5 mg to 15 mg once weekly

Injection sites: abdomen, thigh, or upper arm

Common Adverse Reactions

- Gastrointestinal: nausea, vomiting, diarrhea, constipation, abdominal discomfort.
- Hypoglycemia (low risk when used as monotherapy).
- Injection-site reactions, fatigue, headache.

Contraindications

- Hypersensitivity to tirzepatide or any of the excipients
- Personal or family history of medullary thyroid carcinoma (MTC)
- Multiple endocrine neoplasia syndrome type 2 (MEN 2)

Functional

Tirzepatide is a dual GIP and GLP-1 receptor agonist. It acts as a dual agonist of two physiological receptors, Glucose-Dependent Insulinotropic Polypeptide (GIP) and Glucagon-Like Peptide-1 (GLP-1).

Key effects

- Glucose-dependent insulin secretion
- Improves blood glucose control by increasing insulin release only when blood glucose is elevated, reducing the risk of hypoglycemia.
- Suppresses glucagon secretion
- Reduces hepatic glucose output, further lowering blood glucose.
- Delays gastric emptying
- Prolongs satiety and reduces postprandial glucose excursions.
- Reduces appetite and body weight
- Through central actions on appetite regulation, combined effects of GIP and GLP-1 pathways lead to greater weight reduction than GLP-1 single agonists.
- Improves metabolic profile Beneficially affects body weight, lipids, and other metabolic risk factors.



LYSINE-PROLINE-VALINE

Descriptions

Physical Form – Lyophilized powder

Product Features

- Freeze-dried formulation for maximum shelf life and stability
- Multi-use butyl rubber stopper for repeated sterile access
- Depyrogenated vials, ETO-sterilized, and sealed with tamper-evident aluminum flip-top
- Synthetic tripeptide derived from alpha-MSH (melanocyte-stimulating hormone)

Functional

Anti-inflammatory Properties

KPV (Lysine-Proline-Valine) is studied for its potent ability to inhibit pro-inflammatory cytokines such as TNF- α , IL-1 β , and IL-6. Blocks NF- κ B signaling—key in chronic inflammation, making it a candidate in IBD, colitis, and dermatitis models

Gut & Intestinal Health

Demonstrates protective effects on intestinal lining integrity. Reduces inflammation in murine models of Crohn's disease, ulcerative colitis, and leaky gut

Skin & Wound Support

Accelerates healing in inflammatory skin conditions like eczema and psoriasis. Exhibits soothing effects on topical irritation while reducing redness and swelling.

Immune Regulation

Modulates immune response by balancing macrophage activity and T-cell signaling. May promote resolution of inflammation without immune suppression

Low Systemic Impact

Research suggests KPV delivers therapeutic effects locally without broad systemic immune suppression. Making it favorable for long-term use in localized inflammatory conditions.



KPV

CAS #: 67727-97-3

Formula: $C_{16}H_{30}N_4O_4$

M.W.: 342.43g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



SEMAGLUTIDE

Descriptions

Semaglutide is a long-acting GLP-1 receptor agonist that possesses the triple effects of lowering blood sugar, weight loss, and cardiovascular protection. It is currently one of the most widely used drugs for metabolic diseases worldwide.

Approved Indications

- Type 2 diabetes mellitus
- Improves glycemic control in adults
- Reduces cardiovascular risk in patients with established cardiovascular disease
- Chronic weight management
- Adults with obesity ($\text{BMI} \geq 30 \text{ kg/m}^2$)
- Adults with overweight ($\text{BMI} \geq 27 \text{ kg/m}^2$) and at least one weight-related comorbidity
- Oral formulation
- Glycemic control in adults with type 2 diabetes
- Dosage and Administration (Injectable)

Starting dose: 0.25 mg once weekly for 4 weeks

Maintenance dose: 0.5 mg once weekly

Maximum dose: 1 mg once weekly

Injection sites: Abdomen, thigh, or upper arm

Common Adverse Reactions

Gastrointestinal: Nausea, vomiting, diarrhea, constipation, abdominal distension
Hypoglycemia (low risk as monotherapy)
Headache, fatigue, injection-site reaction

Stability Testing

- Thermal, enzymatic, and oxidative degradation studies
- Shelf-life evaluation & formulation robustness
- Formulation Development
- Enhances solubility, bioavailability, and structural integrity
- Tailored for injectable, topical, and research-grade use

Excipient Compatibility Testing

- Evaluates interactions between peptides & inactive components
- Ensures safety, stability, and performance
- Protease Resistance Evaluation
- Assesses susceptibility to enzymatic breakdown
- Supports development of more durable peptide products
- Encapsulation & Carrier Systems
- Liposomes, microspheres, and other delivery vehicles
- Protects peptides & enables controlled release

Administration Route Assessment

Optimized for:

- Parenteral delivery (injectables)
- Dermal absorption (cosmetic/topical)
- In vitro research applications

Functions

Lower Blood Glucose: Stimulates insulin secretion in a glucose-dependent manner, suppresses glucagon secretion, Delays gastric emptying

Induces Weight Loss: Reduces appetite and food intake via central pathways, Enhances satiety

Cardiovascular protection: Reduces major adverse cardiovascular events in high-risk patients



TESAMORELIN

Descriptions

Tesamorelin (brand name: Egrifta) is a synthetic growth hormone-releasing hormone (GHRH) analog, approved by the FDA in 2010. It is mainly indicated for the treatment of HIV-associated lipodystrophy, with the core effect of selectively reducing visceral adipose tissue (VAT).

Basic Information

CAS No.: 218949-48-5

Molecular Formula: $C_{216}H_{360}N_{72}O_{63}S$

Molecular Weight: approximately 5005.76

Original Developer: Theratechnologies (Canada)

Administration: subcutaneous injection once daily (abdomen)

Functional

Visceral Fat Reduction: Tesamorelin is highly effective in targeting and reducing visceral fat, which is associated with improved metabolic health and decreased risk of cardiovascular diseases.

Enhanced Metabolism: By stimulating growth hormone release, it supports better energy metabolism, aiding in weight management and physical performance.

Improved Insulin Sensitivity: Tesamorelin has been shown to enhance insulin sensitivity, benefiting individuals with metabolic syndrome or at risk of diabetes.

Muscle Preservation: This peptide helps maintain lean muscle mass, even during periods of caloric restriction or aging-related muscle loss.



Tesamorelin

CAS #: 901758-09-6
Formula: $C_{225}H_{370}N_{70}O_{69}S$
M.W.: 5195.908g/mol

PURITY 99% HPLC
RUO Research use only



SEMORELIN

Descriptions

Biogenix Sermo relin is a synthetic hormone that mimics growth hormone-releasing hormone (GHRH), stimulating the pituitary gland to increase Human Growth Hormone (HGH) production. This enhances muscle growth, metabolism, and overall well-being, while also prompting the liver and other tissues to produce Insulin-like Growth Factor 1 (IGF-1), vital for growth and development

Functional

Muscle growth: encourages the development of muscles, enhancing strength and endurance

Fat loss: stimulates the breakdown of stored fat and encourages the body to use it as energy source

Bone Health: Enhances bone density and maintains skeletal strength, contributing to overall bone health.

Brain Health: Supports healthy brain functions for cognitive and emotional well-being.

Improved Sleep: improves sleep patterns resulting in better sleep quality.

Hair, skin and nails health: improves skin elasticity, reduces wrinkles, enhances hair thickness and texture,

Cardiovascular Health: helps reduce the risk of heart disease, enhances cardiac function and improves lipid profile and cholesterol levels.

HOW: Sermorelin is administered via subcutaneous injection using an insulin syringe.

TIMING: Considering Sermorelin has a short half-life, it is recommended for optimal results to split your daily dose into 2 smaller ones across the day. Morning: 1h before first meal and night: 1h after last meal (empty stomach)

Alternatively, it can also be injected 1x a night before going to bed to mimic the body's natural production of HGH during night time.

THERAPEUTIC / FAT-LOSS DOSE: 200-300 mcg, split into 1-2 doses / day.

MUSCLE GROWTH DOSE: 500 – 800mcg, split dose 1-3 doses/ day.

DURATION: use for 3-6 months to see benefits. It doesn't have to be cycled and can be used for up to 36 months according to trials

Note : your solution will have a concentration of 2000mcg/200units or 10mcg/unit if prepared as above. For example, 500mcg/day = 50 units/day, 2mg vial would last for 4 days.



Semorelin

CAS #: 86168-78-7
Formula: $C_{149}H_{216}N_{46}O_{42}S$
M.W.: 3357.933g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



EPITHALON

Description

Biogenix Epitalon is a synthetic peptide derived from Epithalamin, produced naturally in the pineal gland. It boosts telomerase production, which helps lengthen telomeres—protective caps on DNA strands that facilitate cell replication and rejuvenation. As telomeres shorten with age, Epitalon may slow the aging process. Additionally, it aids metabolic regulation, enhances hypothalamic sensitivity to hormonal signals, balances anterior pituitary function, regulates gonadotropin levels, and stimulates melatonin production, thus helping to regulate the sleep-wake cycle.

Setting the Gold Standard in Analytical Testing Compounds

How we are different

- Partner with U.S.-based, ISO/IEC 17025-accredited third-party analytical laboratories
- Produced in a facility with GMP-aligned quality systems
- ≥99% purity reported per lot
- Endotoxin and microbial contamination (sterility) testing performed and reported per lot
- Elemental impurity screening (heavy metals) reported per lot
- Fast, responsive customer support

Functional

Improved Sleep: improves melatonin production and helps regulate the circadian rhythm.

Longevity: Promotes cell replication and rejuvenation. Delays and prevents age-related diseases such as cancer, heart disease, and dementia.

Better skin: improves the health and appearance of the skin.

Anti-oxidant properties: helps mitigate oxidative stress and its associated damage to cells and tissues.

Stress resistance: It can increase your resistance to emotional stress and boost your energy and well-being.

Brain health: Supports long term brain health and cognitive function.

Healing properties: helps heal any deteriorating or injured muscle cells and can accelerate wound healing.

Immune System Regulation: helps improving immune function and resilience.

DOSE AND TIMING: Common dosages range from 5 to 10mg per day. It is advised to start with a lower dose to gauge the body's response. For a smaller dose take 1x a day, for larger dose split into 2x a day, morning and evening.

CYCLE DURATION: Epitalon is recommended via most recent studies to be taken for 21 days, followed by a break of 4 to 6 months. The maximal Epitalon cycle that you should repeat is two times per year.

(Note : your solution will have a concentration of 5mg/100 units if prepared as above. Each vial will last you 2 days if using 5mg/day.)

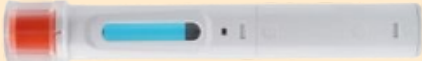
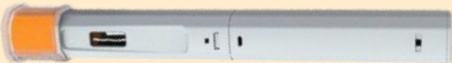
Epithalon

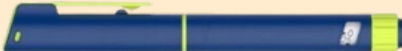
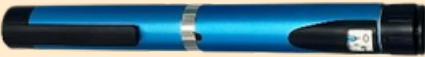
CAS #: 307297-39-8
Formula: $C_{14}H_{21}N_{22}O_9$
M.W.: 390.349g/mol

PURITY 99% HPLC
RUO Research use only

NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.



PRODUCT NAME	MODEL	PRODUCT PICTURE	KEY PARAMETERS
Multi-dose Auto Injector	PDT100T-M		Max Single Dose: 37U, 50U, 60U, 74U, 75U, 80U Compatible with 3ml cartridge
	PD100H-M		Max Single Dose: 74U, 75U, 80U Compatible with 3ml cartridge
	PD100S-M		Max Single Dose: 36U, 37U, 50U, 60U, 72U, 74U, 75U, 80U Compatible with 3ml cartridge
PFS Auto Injector	PD100T-A		Max Single Dose: 1ml / 2.25ml PFS Compatible with 1ml / 2.25ml PFS
	PD100S-A01		Max Single Dose: 1ml / 2.25ml PFS Compatible with 1ml / 2.25ml PFS

PRODUCT NAME	MODEL	PRODUCT PICTURE	KEY PARAMETERS
Disposable Pen Injector	PD100T-D		Max Single Dose: 60U / 80U Compatible with 3ml cartridge
	PD100S-D01		Max Single Dose: 36U, 37U, 50U, 60U, 72U, 74U, 75U, 80U Compatible with 3ml cartridge
	PD100S-D02		Max Single Dose: 36U, 37U, 50U, 60U, 72U, 74U, 75U, 80U Compatible with 3ml cartridge
	PD100Y-D		Max Single Dose: 60U, 74U, 75U Compatible with 3ml cartridge
	PD100M-D		Max Single Dose: 40U Compatible with 3ml cartridge
	PD100H-D		Max Single Dose: 60U Compatible with 3ml cartridge
Reusable Pen	PD100B-R		Max Single Dose: 60U Compatible with 3ml cartridge
Dual Chamber Pen	PD100D-D		Max Single Dose: 50U Compatible with 4ml dual chamber cartridge