Pancragen 20mg-Synthetic Tetrapeptide Bioregulator for Pancreatic Function Research

Our Product Introduction

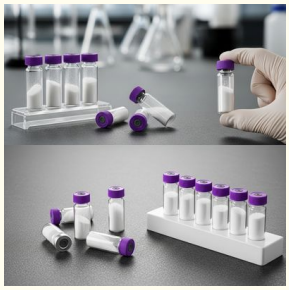
Basic Information

- Place of Origin: China
- Brand Name: Hongbaiyi
- Certification: COA, HPLC MR
- Model Number: HBY-Pancragen
- Minimum Order Quantity: 5 kits
- Price: Negotiable
- Packaging Details: 20mg or according to customer's requirements.
- Delivery Time: 3-5 work days after your payment
- Payment Terms: Alibaba, T/T, Western Union
- Supply Ability: 20,000 boxes /month

Product Specification

- Product Name: Pancragen 20mg (Bioregulator)
- Amino Acid Sequence: Lys-Glu-Asp-Trp (KEDW)
- Molecular Formula: $C_{26}H_{36}N_6O_9$
- Molecular Weight: 576.25
- Form: Lyophilized Powder (for Stability)
- Solubility: Water-soluble
- Packaging: 20mg*10vials
- Purity: >99% (HPLC-tested)
- Highlight: **Pancragen 20mg pancreatic peptide**, **synthetic tetrapeptide bioregulator**, **pancreatic function research peptide**

More Images



Product Description

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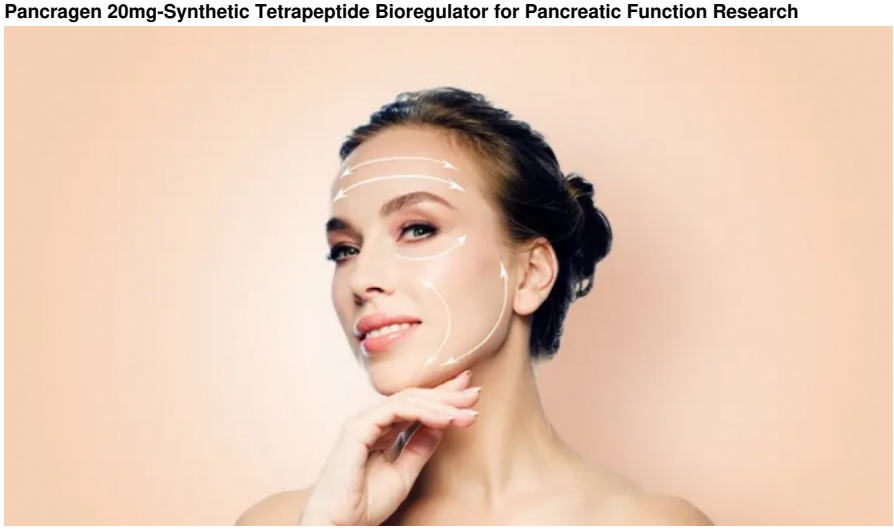

Pancragen 20mg (Bioregulator) Introduction

Pancragen is a synthetic tetrapeptide bioregulator, also known as a Khavinson peptide, designed to support and restore pancreatic function. Composed of the amino acid sequence Lys-Glu-Asp-Trp (KEDW), it was originally derived from peptides isolated in bovine pancreatic cells and acts primarily by interacting with nuclear components like histones and DNA to influence gene expression, cell differentiation, and epigenetic regulation in pancreatic tissues. Research focuses on its potential to normalize endocrine activity, improve glucose metabolism, enhance insulin production, and mitigate age-related or diabetes-induced pancreatic decline. Supplied as a 20mg vial of lyophilized powder for laboratory use, Pancragen is not approved for human consumption and is intended solely for in vitro research.

Chemical and Physical Properties

Property	Details
Amino Acid Sequence	Lys-Glu-Asp-Trp (KEDW)
Molecular Formula	$C_{26}H_{36}N_6O_9$
Molecular Weight	576.6 g/mol
Synonyms	KEDW, lysyl-glutamyl-aspartyl-tryptophan, tetrapeptide bioregulator
PubChem CID	68452887
Form	Lyophilized powder (for stability)
Solubility	Highly soluble in water
Packaging	20mg per vial
Purity	>99% (HPLC)

Research Applications

Blood Sugar and Diabetes Management: In animal models of diabetes and hyperinsulinemia, Pancragen normalizes insulin and C-peptide levels, reduces fasting glucose, lowers insulin resistance, and improves glucose tolerance without the side effects seen in some pharmaceuticals (e.g., unlike glimepiride). It enhances β-cell insulin production while suppressing α-cell glucagon secretion, restoring pancreatic morphology and function even after treatment cessation.

Metabolic Syndrome and Aging: By regulating melatonin secretion through insulin-glucagon feedback loops, it reduces the incidence and severity of metabolic syndrome in aging models. It upregulates pancreatic differentiation factors (e.g., Ptf1a, Pdx1, Pax6) and proliferation markers (e.g., PCNA, Ki67), while decreasing pro-apoptotic proteins like p53 and aging biomarkers such as caspase-3 and cathepsin B.

Pancreatic Cell Protection and Proliferation: Stimulates growth and differentiation of acinar and islet cells, increases expression of matrix metalloproteinases (MMP2, MMP9), serotonin, and anti-apoptotic Mcl1, promoting overall endocrine function in elderly or stressed pancreatic tissues.

Vascular and Endothelial Health: Protects mesenteric capillaries from hyperglycemia-induced damage by normalizing endothelial adhesion, potentially preventing diabetes complications like cardiovascular disease or nephropathy.

Other Potential Uses: Modulates inflammation (e.g., reduces TNF-α, increases IGF-1) and oxidative stress; preliminary studies suggest benefits in early metabolic dysfunction and anti-aging therapies for the endocrine system.

Handling and Storage

Strictly for laboratory research purposes; prohibited for human or animal use, ingestion, or medical treatment.

Store lyophilized powder refrigerated (2-8°C) to maintain stability; reconstitute with bacteriostatic water for experiments.

Purity typically >99% via HPLC; handled by qualified professionals only, assuming all risks of use.

Research Applications

Both peptides show promise in preclinical models for age-related diseases, but their applications diverge:

Category	Pancragen	Epitalon
Primary Focus	Pancreatic and metabolic health (e.g., diabetes, insulin resistance)	Anti-aging and telomere maintenance (e.g., cellular longevity)

Category	Pancragen	Epitalon
Key Benefits	- Normalizes insulin/C-peptide levels and glucose tolerance in diabetic models. - Reduces metabolic syndrome incidence in aging animals. - Protects vascular endothelium from hyperglycemia damage. - Boosts IGF-1 and serotonin while lowering TNF-α.	- Activates telomerase to lengthen telomeres in fibroblasts and human cell lines. - Enhances pineal function and melatonin production for better sleep/circadian rhythm. - Promotes wound healing by inhibiting fibrosis and EMT in stressed cells. - Increases lifespan in rodent models by 10-20% via antioxidant effects.
Anti-Aging Effects	Resets pancreatic gene expression, decreases senescence markers (e.g., p53, caspase-3), and supports proliferation (PCNA, Ki67) in elderly tissues.	Directly combats telomere shortening, a hallmark of aging; restores youthful gene profiles and reduces oxidative stress systemically.
Other Potential Uses	Postoperative recovery, inflammatory conditions, and early metabolic dysfunction prevention.	Neuroprotection, immune modulation, and potential cancer prevention via controlled cell division.
Model Evidence	Strong in animal diabetes/hyperinsulinemia studies; benefits persist post-treatment.	Robust in vitro/in vivo telomere assays; human cell studies show G1-phase telomere elongation.

Similarities

Bioregulator Class: Both are short-chain peptides that influence DNA-histone interactions for epigenetic rejuvenation, with high specificity and low toxicity in research settings.

Anti-Aging Overlap: They reduce cellular senescence and apoptosis, upregulate growth factors, and show enhanced efficacy in older subjects.

Administration and Safety: Research-grade only; reconstituted in bacteriostatic water, stored refrigerated (2-8°C). No reported genotoxicity; purity >99% via HPLC.

Limitations: Preclinical data dominate; human trials are sparse or absent. Not for therapeutic use.

Differences

Scope: Pancragen is narrowly endocrine-focused (pancreas/metabolism), ideal for diabetes models, while Epitalon offers broader longevity benefits via telomerase, suiting general anti-aging research.

Molecular Profile: Pancragen's tryptophan inclusion may enhance bioavailability or receptor binding, contributing to its metabolic modulation; Epitalon's simpler glycine terminus supports telomerase docking.

Potency in Models: Pancragen excels in restoring organ morphology (e.g., islet cells), whereas Epitalon demonstrates quantifiable telomere extension (up to 33% in some studies).

For lab procurement, consult peptide suppliers for batch-specific data. While synergistic use in multi-peptide protocols is explored in research, consult protocols carefully.

Product Images

FAQ

Q1: Can I get some samples?

A: Yes, we can provide samples. However, customers must bear the shipping cost.

Q2: How to pay?

A: We accept various payment methods, including T/T and other options.

Q 3: What is your MOQ (Minimum Order Quantity)?

A: Our standard MOQ is 5kits. However, smaller quantities, such as 100 grams, can be arranged for a corresponding sample fee.

Q 4: What is the shipping time?

A: Orders are usually shipped within 3-7 days with a tracking number. Delivery times vary by destination. Please get in touch with us for details.

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