9051 Mira Mesa Blvd, #910094
San Diego, CA 92191
Tel: 760-390-3989

Pentagastrin

Pentagastrin
HRM0080

Product Overview

Name	Pentagastrin

Description

Pentagastrin

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized with no additives.

Stability

Lyophilized Pentagastrin although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Pentagastrin should be stored at 4°C between 2-7 days and for future use below -18°C. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Please prevent freeze-thaw cycles.

Purity

Greater than 97.0% as determined by analysis by RP-HPLC.

Amino acid sequence

Boc-β-Ala-Trp-Met-Asp-Phe-NH2.

Solubility

It is recommended to reconstitute the lyophilized Pentagastrin in sterile 18MΩ-cm H2O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Pentagastrin is a synthetic peptide that has long been recognized for its significant influence on gastric physiology. Its ability to stimulate gastric acid secretion and regulate various aspects of gastrointestinal function has made it a valuable tool in both basic research and clinical practice. This research aims to comprehensively investigate the multifaceted effects of pentagastrin on the gastrointestinal system, shedding light on its mechanisms of action and potential clinical applications. The primary objective of this study is to elucidate the mechanisms underlying pentagastrin-induced gastric acid secretion. In vitro experiments using isolated gastric cells or tissue preparations will be conducted to explore the signaling pathways activated by pentagastrin. This will include investigations into the role of intracellular messengers, such as cyclic AMP (cAMP), calcium ions (Ca2+), and protein kinases, in mediating the secretory response. The second objective is to assess the impact of pentagastrin on gastrointestinal motility. In vivo

studies using animal models or human volunteers will be employed to investigate its effects on gastric emptying, intestinal transit, and colonic motility. These experiments may provide insights into the potential use of pentagastrin in the management of gastrointestinal motility disorders. The third objective is to explore the clinical applications of pentagastrin. Clinical trials and studies involving human subjects will be conducted to evaluate its potential therapeutic uses, such as in the diagnosis and treatment of gastric acid-related disorders, including peptic ulcers and gastroesophageal reflux disease (GERD). Additionally, the safety and efficacy of pentagastrin as an adjunct to medical imaging techniques, such as gastric scintigraphy, will be examined. By investigating the diverse effects of pentagastrin on the gastrointestinal system, this research aims to enhance our understanding of gastric physiology and its clinical relevance. The findings may lead to improved diagnostic and therapeutic strategies for gastrointestinal disorders, ultimately benefiting patients affected by these conditions.

Precautions

Pentagastrin is for research use only and not for use in diagnostic or therapeutic procedures.

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