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

Bremelanotide

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HRM0007

Product Overview

Name	Bremelanotide

Description

Bremelanotide

Synonyms

PT-141, Rekynda, bremelanotide acetate.

Physical Appearance

Sterile Filtered White lyophilized (freeze-dried) powder.

Formulation

The protein was lyophilized with no additives.

Stability

Lyophilized Bremelanotide although stable at room temperature for 3 weeks, should be stored desiccated below -18°C. Upon reconstitution Bremelanotide 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

Ac-Nle-cyclo(-Asp-His-D-Phe-Arg-Trp-Lys)-OH.

Solubility

It is recommended to reconstitute the lyophilized Bremelanotide in sterile 18MΩ-cm H 2 O not less than 100 µg/ml, which can then be further diluted to other aqueous solutions.

Background

Bremelanotide (PT-141), a synthetic heptapeptide, is a novel therapeutic agent primarily utilized for the treatment of sexual dysfunction. This paper provides an exhaustive review of Bremelanotide, detailing its biochemical structure, mechanism of action, therapeutic applications, and future prospects in clinical medicine. Bremelanotide (PT-141), derived from Melanotan II, is a synthetic peptide developed for its role in treating sexual dysfunction in both men and women (Clayton et al., 2016). This paper presents a comprehensive examination of Bremelanotide, its biological properties, and potential therapeutic uses. Bremelanotide acts as a non-selective agonist of the melanocortin

receptors, primarily MC3R and MC4R, present in the central nervous system. The peptide initiates its action in the hypothalamus, leading to downstream effects on sexual desire and arousal (King et al., 2007). The US Food and Drug Administration approved Bremelanotide for the treatment of premenopausal women with hypoactive sexual desire disorder (HSDD) in 2019. In clinical trials, it demonstrated efficacy in enhancing sexual desire and reducing distress associated with HSDD (Kingsberg et al., 2019). While the current focus of Bremelanotide is on treating sexual dysfunction, its future potential may extend to other areas due to its unique mechanism of action. Further research is needed to explore the full therapeutic potential of this intriguing peptide. In conclusion, Bremelanotide represents a significant advance in sexual dysfunction therapeutics, with potential implications extending beyond this realm.

Precautions

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

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