

## Product Data Sheet

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Product Name: Human PTHrP-(1-36)

Cat. No.: GC72790

### Chemical Properties

Cas. No. 172867-62-8

Formula  $C_{191}H_{305}N_{59}O_{52}$  M.Wt 4259.83

Solubility  $H_2O$  : 100 mg/mL (23.48 mM; Need ultrasonic) Storage Sealed storage, away from moisture and light, under nitrogen

General tips For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.

Structure

AVSEHQLLHDKGKSIQDLRRRFFLHHLIAEIHAEI

### Background

Human PTHrP-(1-36) is a secretory form of PTHrP with anticalciuric effects. Human PTHrP-(1-36) enhances beta cell function and proliferation. Human PTHrP-(1-36) can be used in the research of humoral percalcemia of malignancy (HHM) and perparatroidism.

Human PTHrP-(1-36) (EC50: 0.05 nM) increases intracellular calcium in human epidermal keratinocytes[2]. Human PTHrP-(1-36) (100 nM, 24 h) increases human  $\beta$ -cell proliferation[3]. Human PTHrP-(1-36) (100 nM, 30 min) enhances insulin secretion in human islets[3]. PTHrP-(1-36) (mouse,

**Caution: Product has not been fully validated for medical applications. For research use only.**

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EC50: 1 nM) induces a rapid Ca<sup>2+</sup> response in UMR 106 cells[4].

PTHrP-(1-36) (mouse, 160 µg/kg, s.c., for 5 days/week for 7, 30, or 90 days) enhances beta cell regeneration and increases beta cell mass in a mouse model of partial pancreatectomy[5]. PTHrP-(1-36) (mouse, 100 µg/kg, s.c., every other day) reverses the observed decrease of Wisp1 expression in the diabetic mice[6].

### References:

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- [2]. Orloff JJ, et al. Analysis of PTHrP binding and signal transduction mechanisms in benign and malignant squamous cells. Am J Psiol. 1992 May;262(5 Pt 1):E599-607.
- [3]. Guthalu Kondegowda N, et al. Paratroid hormone-related protein enhances human β-cell proliferation and function with associated induction of cyclin-dependent kinase 2 and cyclin E expression. Diabetes. 2010 Dec;59(12):3131-8.
- [4]. Valín A, et al. C-terminal paratroid hormone-related protein (PTHrP) (107-139) stimulates intracellular Ca(2+) through a receptor different from the type 1 PTH/PTHrP receptor in osteoblastic osteosarcoma UMR 106 cells. Endocrinology. 2001 Jul;142(7):2752-9.
- [5]. Mozar A, et al. Paratroid Hormone-Related Peptide (1-36) Enhances Beta Cell Regeneration and Increases Beta Cell Mass in a Mouse Model of Partial Pancreatectomy. PLoS One. 2016 Jul 8;11(7):e0158414.
- [6]. Portal-Núñez S, et al. Alterations of the Wnt/beta-catenin pathway and its target genes for the N- and C-terminal domains of paratroid hormone-related protein in bone from diabetic mice. FEBS Lett. 2010 Jul 16;584(14):3095-100.

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