

Product Data Sheet

Product Name: Parathyroid Hormone (1-34), bovine

Cat. No.: GP10106

Chemical Properties

Cas. No. 12583-68-5

Formula $C_{183}H_{288}N_{54}O_{50}S_2$

M.Wt 4108.71

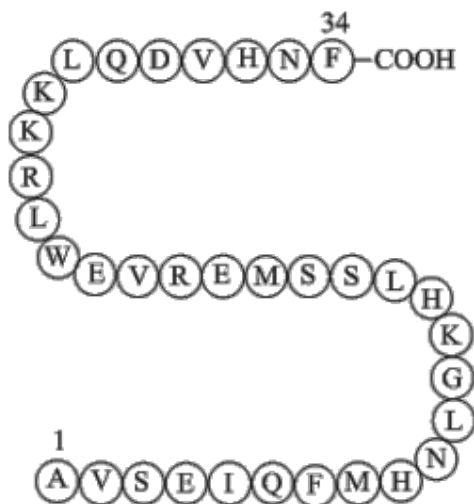
Solubility $\geq 410.9\text{mg/mL}$ in DMSO

Storage Store at -20°C

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



Protocol

Cell experiment [1]:

Cell lines Mouse primary bone marrow stromal cells (BMSCs).

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

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Preparation method Dissolved in acetic acid [1]. General tips for obtaining a higher concentration: Please warm the tube at 37°C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reaction Conditions 100 ng/ml; 2 h.

Applications bPTH(1-34) increases RANKL mRNA levels and inhibits osteoprotegerin (OPG) gene expression. bPTH(1-34) also increases the amount of TRACP+ cells.

Animal experiment [2]:

Animal models C57BL/6 mice.

Dosage form 80 µg/kg/day; 7 or 14 days; injected subcutaneously.

Applications PTH(1-34) significantly increases the percentage of TN/CD115(+) CD117(high) and TN/CD115(+) CD117(int) cells in bone marrow on day 7. However, PTH(1-34) decreases the amount of TN/CD115(+) CD117(low) cells by 39% on day 7. PTH increases receptor activator of NF-κB ligand (RANKL)- and macrophage colony-stimulating factor (M-CSF)-stimulated in vitro osteoclastogenesis and bone resorption in TN/CD115+ cells.

Other notes Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

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References:

- [1]. Huang JC, Sakata T, Pflieger LL, et al. PTH differentially regulates expression of RANKL and OPG. J Bone Miner Res. 2004, 19(2): 235-244.
- [2]. Jacome-Galarza CE, Lee SK, Lorenzo JA, et al. Parathyroid hormone regulates the distribution and osteoclastogenic potential of hematopoietic progenitors in the bone marrow. J Bone Miner Res, 2011, 26(6): 1207-1216.

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