Parathyroid Hormone (1-34), bovine

Cat. No.: HY-P1252

CAS No.: 12583-68-5

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

Molecular Weight: 4108.77

AVSEIQFMHNLGKHLSSMERVEWLRKKLQDVHNF

Sequence Shortening: AVSEIQFMHNGKHLSSMERVEWLRKKLQDVHNF

Target: Thyroid Hormone Receptor

Pathway: Vitamin D Related/Nuclear Receptor

Storage: Sealed storage, away from moisture and light, under nitrogen

Powder -80°C 2 years

-20°C 1 year

* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen)

SOLVENT & SOLUBILITY

In Vitro

H_2O : 50 mg/mL (12.17 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	0.2434 mL	1.2169 mL	2.4338 mL
	5 mM	0.0487 mL	0.2434 mL	0.4868 mL
	10 mM	0.0243 mL	0.1217 mL	0.2434 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Parathyroid Hormone (1-34), bovine is a potent parathyroid hormone (PTH) receptor agonist. Parathyroid Hormone (1-34), bovine increases calcium and inorganic phosphate levels in vivo. Parathyroid Hormone (1-34), bovine can be used for th reseach of osteoporosis[1].

In Vitro

Parathyroid Hormone (1-34), bovine (0.1-100 ng/mL; 2-20 days) are added to the medium, it inhibits osteoblast proliferation in a dose-dependent manner. In another group, bPTH are added to the culture medium from day 1 to day 10, but not from days 11 to 20, a rebound of proliferation is observed in the PTH Day 1–10 group after bPTH withdrawal[1].

Parathyroid Hormone (1-34), bovine (0.1-100 ng/mL; 2-20 days) induces diverse effects on the calcium and phosphorus content of culture medium. The calcium and phosphorus content of culture medium in the PTH-C 100 ng/mL group are higher than in teh control group[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	MC3T3-E1 cells
Concentration:	0.1-100 ng/mL
Incubation Time:	2-20 days
Result:	Resulted a decrease of osteoblast proliferationin concentration-dependent manner. Resulted in a rebound of proliferation when PTH withdrawal.

In Vivo

Parathyroid Hormone (1-34)(subcutaneous injection; 80 μg/kg; 5 days) increases serum osteocalcin concentrations without changing serum inorganic phosphate or calcium concentrations in either group of old animals. Serum 1,25-dihydroxyvitamin D concentrations are significantly higher in the PTH-treated senile female rats than the sex-matchedvehicle-treated controls[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

CUSTOMER VALIDATION

- J Ethnopharmacol. 2022 May 29;115399.

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REFERENCES

[1]. B H Mitlak, et al. Intermittent administration of bovine PTH-(1-34) increases serum 1,25-dihydroxyvitamin D concentrations and spinal bone density in senile (23 month) rats. J Bone Miner Res. 1992 May;7(5):479-84.

[2]. M Takigawa, et al. Studies on chondrocytes from mandibular condylar cartilage, nasal septal cartilage, and spheno-occipital synchondrosis in culture. I. Morphology, growth, glycosaminoglycan synthesis, and responsiveness to bovine parathyroid hormone (1-3

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