(D-Trp12,Tyr34)-pTH (7-34) amide (bovine)

Cat. No.: HY-P2426

CAS No.: 118102-98-0

Molecular Formula: $C_{165}H_{251}N_{49}O_{40}S_2$

Molecular Weight: 3625.25

Sequence: Phe-Met-His-Asn-Leu-{d-Trp}-Lys-His-Leu-Ser-Ser-Met-Glu-Arg-Val-Glu-Trp-Leu-Arg-Lys-Lys-Leu-Gln-Asp-Val-His-Asn-Tyr-NH2

FMHNL-{d-Trp}-KHLSSMERVEWLRKKLQDVHNY-NH_2

Sequence Shortening: FMHNL-{d-Trp}-KHLSSMERVEWLRKKLQDVHNY-NH2

Target: Thyroid Hormone Receptor

Pathway: Vitamin D Related/Nuclear Receptor

Storage: Sealed storage, away from moisture

Powder -80°C 2 years

-20°C 1 year

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

SOLVENT & SOLUBILITY

In Vitro

H_2O : 25 mg/mL (6.90 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.2758 mL	1.3792 mL	2.7584 mL
5 mM	0.0552 mL	0.2758 mL	0.5517 mL
10 mM	---	---	---

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

BIOLOGICAL ACTIVITY

Description

(D-Trp12,Tyr34)-pTH (7-34) amide (bovine) is a potent and competitive antagonist of parathyroid hormone (PTH), with a K_i of 69 nM in bovine renal cortical membrane. (D-Trp12,Tyr34)-pTH (7-34) amide (bovine) can be used for growth and development regulation[1][2].

IC_{50} & Target

Ki: 69 nM (PTH)[1]

In Vitro

(D-Trp12,Tyr34)-pTH (7-34) amide (0.05-10 μM) causes a concentration-dependent inhibition of PTHrP or PTH-stimulated cAMP formation in opossum kidney (OK) cells[2].

(D-Trp12,Tyr34)-pTH (7-34) amide (0.1-10 μM) attenuates inhibition of Nap_iT promoted by 1 nM of either PTHrP or PTH[2].

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

In Vivo	(D-Trp12,Tyr34)-pTH (7-34) amide (1 mg/mL once, 0.1 mg/mL for 6 h; i.v.) has no significant effect on serum calcium levels in hypercalcemic athymic nude mice bearing a human squamous cell carcinoma of the lung[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Goldma ME, et, al. A new highly potent parathyroid hormone antagonist: [D-Trp12,Tyr34]bPTH-(7-34)NH2. Endocrinology. 1988 Nov; 123(5): 2597-9.

[2]. Pizurki L, et, al. Inhibition by (D-Trp12,Tyr34)bPTH(7-34)amide of PTH and PTHrP effects on Pi transport in renal cells. Am J Physiol. 1990 Aug; 259(2 Pt 2): F389-92.

[3]. Kukreja SC, Inactivation by plasma may be responsible for lack of efficacy of parathyroid hormone antagonists in hypercalcemia of malignancy. Endocrinology. 1994 May; 134(5): 2184-8.

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