(p-Iodo-Phe7)-ACTH (4-10)

Cat. No.:	HY-P3567
CAS No.:	159600-82-5
Molecular Formula:	$C_{44}H_{58}IN_{13}O_{10}S$
Molecular Weight:	1087.98
Sequence Shortening:	MEH-{p-Iodo-Phe}-RWG
Target:	Melanocortin Receptor
Pathway:	GPCR/G Protein; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.

BIOLOGICAL ACTIVITY

Description

(p-Iodo-Phe7)-ACTH (4-10) is a adrenocorticotrophic hormone (ACTH) derivative, which is produced and secreted by the anterior pituitary gland. (p-Iodo-Phe7)-ACTH (4-10) serves as a melanocortin (MC) receptor antagonist and inhibits α-melanocyte-stimulating hormone (α-MSH)-induced excessive grooming behavior in rats[1].

In Vitro

(p-Iodo-Phe7)-ACTH (4-10) (1 μM) exhibits inhibition of α-MSH-induced (1 nM-1 μM) cAMP accumulation in 293 HEK cells expressing either the rat melanocortin MC_3, human melanocortin MC_4 or ovine melanocortin MC_5 receptor[1].
[Phe-I^7]ACTH(4-10) has higher affinity for the MC_3, MC_4, and MC_5 receptors but lower for the MC_1 compared to ACTH(4-10)[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

(p-Iodo-Phe7)-ACTH (4-10) (15 μg per animal; i.c.v.; single dose) blocks the a-MSH-induced excessive grooming behavior in rats[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Male Wistar rats (150 g)[1]
Dosage:	1.5 or 15 μg per animal, mixed with 1.5 μg α-MSH or not
Administration:	Intracerebroventricular injection; one week prior to the experiment
Result:	Didn't induce excessive grooming behavior by single dose. Inhibited the induction of excessive grooming behavior by a-MSH.

REFERENCES

[1]. Adan RA, et al. Identification of antagonists for melanocortin MC3, MC4 and MC5 receptors. Eur J Pharmacol. 1994 Nov 15;269(3):331-7.

[2]. Schiöth HB, et al. Selectivity of [Phe-I7], [Ala6], and [D-Ala4,Gln5,Tyr6] substituted ACTH(4-10) analogues for the melanocortin receptors. Peptides. 1997;18(5):761-3.

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

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