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Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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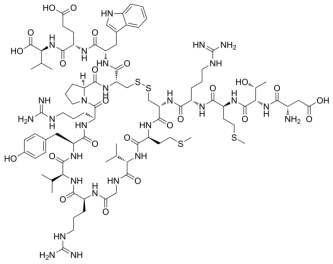
Melanin Concentrating Hormone, salmon



Cat. No.: HY-P1525

CAS No.: 87218-84-6

Molecular Formula: $C_{89}H_{139}N_{27}O_{24}S_4$

Molecular Weight: 2099.48

Sequence: Asp-Thr-Met-Arg-Cys-Met-Val-Gly-Arg-Val-Tyr-Arg-Pro-Cys-Trp-Glu-Val (Disulfide bridge: Cys5-Cys14)

Sequence Shortening: DTMRCMVGRVYRPCWEV (Disulfide bridge: Cys5-Cys14)

Target: MCHR1 (GPR24)

Pathway: GPCR/G Protein; Neuronal Signaling

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

DMSO : 100 mg/mL (47.63 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	0.4763 mL	2.3815 mL	4.7631 mL
5 mM	0.0953 mL	0.4763 mL	0.9526 mL
10 mM	0.0476 mL	0.2382 mL	0.4763 mL

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

BIOLOGICAL ACTIVITY

Description

Melanin Concentrating Hormone, salmon is a 19-amino-acid neuropeptide initially identified in the pituitary gland of teleost fish, which regulates food intake, energy balance, sleep state, and the cardiovascular system. Melanin-concentrating hormone is a ligand for an orphan G protein-coupled receptor (SLC-1/GPR24) and MCHR2.

IC_{50} & Target

SLC-1/GPR24, MCHR2[1]

In Vitro

An orphan G protein-coupled receptor (SLC-1/GPR24) has been identified as a receptor for MCH (MCHR1). MCHR2 has higher protein sequence homology to MCHR1 than any other G protein-coupled receptor. MCHR2 is specifically activated by nanomolar concentrations of MCH, binds to MCH with high affinity, and signals through Gq protein[1].

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

In Vivo	Melanin Concentrating Hormone stimulates appetite. Continuous infusion of Melanin Concentrating Hormone into the ventricular system increases food intake for 7-8 days[2]. Intracerebroventricular infusion of Melanin Concentrating Hormone (10 μg/day) causes a slight but significant increase in body weight in mice maintained on the regular diet. Chronic stimulation of the brain Melanin Concentrating Hormone system could cause obesity in mice[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

PROTOCOL

Kinase Assay [1]	Binding of ^{125}I-labeled Melanin Concentrating Hormone (MCH) to MCHR1 and MCHR2 is measured by filtration binding assay. Membranes (10 μg protein) from transiently transfected HEK293-MCHR1 and HEK293-MCHR2 cells are mixed with 0-9.8 nM ^{125}I-labeled MCH in the binding buffer (50 mM Hepes/10 mM $MgCl_{⊠⊠2}$/2 mM EGTA; protease inhibitors, 0.1% BSA, pH 7.6). After incubation for 1 h at room temperature, membrane-bound ^{125}I-labeled MCH is separated from the free ^{125}I-labeled MCH by filtration through a 96-well GF/B plate on a Packard Filtermate Cell Harvester and ished with ice-cold binding buffer supplemented with 80 mM NaCl. Eighty microliters of scintillation liquid is added, and the radioactivity is counted on a Packard Microplate Topcount[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
Animal Administration [2][3]	Rats[2] Both male Wistar and male Sprague-Dawley rats weighing between 310 and 370 g (age 8-11 weeks) are used in the study. All animals receive food which had the following dry weight composition: 64% carbohydrate, 22% protein, 4.3% fat, 4% cellulose and 5.5% ash. For chronic experiments, the rats are infused either with artificial CSF (0.5 μL/h) or MCH (8 μg/rat/day).Body weight and food intake are then recorded daily for 12 days[2]. Mice[3] Male C57BL/6J mice is prepared for measurement of spontaneous motor activity. Melanin Concentrating Hormone (10 μg/day) or the vehicle is infused for 14 days under the regular diet-fed condition. Motor activity is measured during the last 3 days of the 14-day infusion by an activity monitoring system in home cages[3]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. An S, et al. Identification and characterization of a melanin-concentrating hormone receptor. Proc Natl Acad Sci U S A. 2001 Jun 19;98(13):7576-81.

[2]. Della-Zuana O, et al. Acute and chronic administration of melanin-concentrating hormone enhances food intake and body weight in Wistar and Sprague-Dawley rats. Int J Obes Relat Metab Disord. 2002 Oct;26(10):1289-95.

[3]. Gomori A, et al. Chronic intracerebroventricular infusion of MCH causes obesity in mice. Melanin-concentrating hormone. Am J Physiol Endocrinol Metab. 2003 Mar;284(3):E583-8. Epub 2002 Nov 26.

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