

PRODUCT INFORMATION



MCH (human, mouse, rat) (trifluoroacetate salt)

Item No. 24462

Formal Name: L- α -aspartyl-L-phenylalanyl-L- α -aspartyl-L-methionyl-L-leucyl-L-arginyl-L-cysteinyl-L-methionyl-L-leucylglycyl-L-arginyl-L-valyl-L-tyrosyl-L-arginyl-L-prolyl-L-cysteinyl-L-tryptophyl-L-glutamyl-L-valine, cyclic (7 \rightarrow 16)-disulfide, trifluoroacetate salt

Synonym: Melanin-Concentrating Hormone

MF: C₁₀₅H₁₆₀N₃₀O₂₆S₄ • XCF₃COOH

FW: 2,386.8

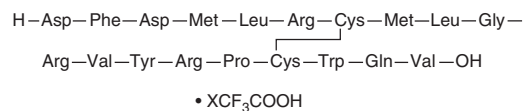
Purity: \geq 95%

Supplied as: A lyophilized powder

Storage: -20°C

Stability: \geq 4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.



Laboratory Procedures

Melanin-concentrating hormone (MCH) (human, mouse, rat) (trifluoroacetate salt) is supplied as a lyophilized powder. A stock solution may be made by dissolving the MCH (human, mouse, rat) (trifluoroacetate salt) in water. The solubility of MCH (human, mouse, rat) (trifluoroacetate salt) in water is approximately 1 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

MCH is an endogenous hypothalamic neuropeptide hormone that is an agonist at MCH receptors.¹ It binds to MCH₁ and MCH₂ receptors (IC₅₀s = 0.17 and 2.9 nM, respectively, for the human receptors) and stimulates calcium accumulation with EC₅₀ values of 28 and 50 nM, respectively, in an aequorin bioluminescence functional assay. MCH also binds to the rat MCH₁ receptor (K_i = 0.16 nM in CHO cells), stimulates calcium accumulation (EC₅₀ = 1.79 nM), and inhibits intracellular cAMP accumulation induced by forskolin (Item No. 11018; EC₅₀ = 0.46 nM).² It binds to mouse MCH receptors on melanoma B16 cells (K_i = 33 nM) and dose-dependently activates the mitogen-activated protein kinase (MAPK) signaling pathway.³ MCH (5 nmol/kg, i.c.v.) increases cumulative food intake in rats.²

References

1. Bednarek, M.A., Tan, C., Hreniuk, D.L., *et al.* Synthesis and biological evaluation *in vitro* of a selective, high potency peptide agonist of human melanin-concentrating hormone action at human melanin-concentrating hormone receptor 1. *J. Biol. Chem.* **277**(16), 13821-13826 (2002).
2. Maulon-Feraille, L., Della Zuana, O., Suply, T., *et al.* Appetite-boosting property of pro-melanin-concentrating hormone₁₃₁₋₁₆₅ (neuropeptide-glutamic acid-isoleucine) is associated with proteolytic resistance. *J. Pharmacol. Exp. Ther.* **302**(2), 766-773 (2002).
3. Schlumberger, S.E., Saito, Y., Giller, T., *et al.* Different structural requirements for melanin-concentrating hormone (MCH) interacting with rat MCH-R₁ (SLC-1) and mouse B16 cell MCH-R. *J. Recept. Signal Transduct. Res.* **23**(1), 69-81 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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