
Product Data Sheet

Product Name: β -Melanocyte Stimulating Hormone (MSH), human (Beta-MSH (1-22) (human))

Cat. No.: GC33693

Chemical Properties

Cas. No. 17908-57-5

SMILES Ala-Glu-Lys-Lys-Asp-Glu-Gly-Pro-Tyr-Arg-Met-Glu-His-Phe-Arg-Trp-Gly-Ser-Pro-Pro-Lys-Asp

Formula $C_{118}H_{174}N_{34}O_{35}S$ M.Wt 2660.92

Solubility $H_2O : \geq 100 \text{ mg/mL (37.58 mM)}$ Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37°C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available sizes: ship with RT, or blue ice upon request.

Structure

Background

β -Melanocyte Stimulating Hormone (MSH), human is a melanocortin (MC) receptor agonist.

β -Melanocyte Stimulating Hormone is a powerful anti-inflammatory agent whose effect is brought by activation of the central MC3/MC4 receptors and thereby inhibits NO production by inhibiting the translocation of transcription factor NF- κ B to the nuclei of the brain cells and decreasing iNOS expression[1]. β -Melanocyte Stimulating Hormone has significantly higher affinity at human MC4-R transfected into CHO cells ($K_i=11.4\pm 0.4 \text{ nM}$) and MC4-R in rat hypothalamic homogenates ($K_i=22.5\pm 2.3 \text{ nM}$)[2].

β -Melanocyte Stimulating Hormone suppresses LPS-induced nuclear translocation of the transcription factor NF- κ B, and inhibits the expression of inducible nitric oxide synthase, and the following nitric oxide overproduction in the brain[1]. β -Melanocyte Stimulating Hormone is a key ligand at the MC4-R populations that regulate feeding, and that inhibition of tonic release of β -MSH is one mechanism contributing to hunger in under-

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

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feeding[2].

[1]. Muceniece R, et al. Beta-MSH inhibits brain inflammation via MC(3)/(4) receptors and impaired NF-kappaB signaling. J Neuroimmunol. 2005 Dec;169(1-2):13-9. [2]. Harrold JA, et al. beta-MSH: a functional ligand that regulated energy homeostasis via hypothalamic MC4-R? Peptides. 2003 Mar;24(3):397-405.

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