

Product Data Sheet

Product Name: Endomorphin-1

Cat. No.: GP10065

Chemical Properties

Cas. No. 189388-22-5

Chemical Name (2S)-1-[(2S)-2-amino-3-(4-hydroxyphenyl)propanoyl]-N-[(2S)-1-[(2S)-1-amino-1-oxo-3-phenylpropan-2-yl]amino]-3-(1H-indol-3-yl)-1-oxopropan-2-yl]pyrrolidine-2-carboxamide

SMILES C1CC(N(C1)C(=O)C(CC2=CC=C(C=C2)O)N)C(=O)NC(CC3=CNC4=CC=CC=C43)C(=O)NC(CC5=CC=CC=C5)C(=O)N

Formula $C_{34}H_{38}N_6O_5$ M.Wt 610.67

Solubility $\geq 30.55\text{mg/mL}$ in DMSO Storage Desiccate 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 size: ship with RT, or blue ice upon request.

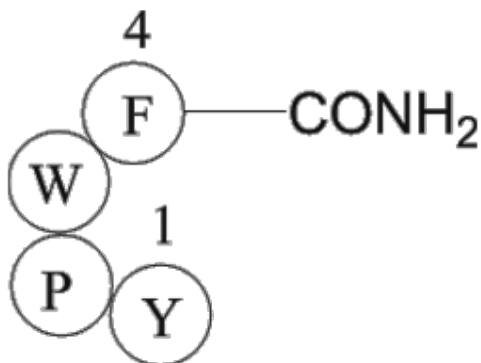
Caution: Product has not been fully validated for medical applications. For research use only.

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Address: 10292 Central Ave. #205, Montclair, CA, USA

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Structure



Protocol

Cell experiment [1]:

Cell lines Primary human fetal mixed glial/neuronal brain cell, human microglial cell

Preparation method The solubility of this compound in DMSO is >30.6 mg/mL. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting condition 0.1 nM

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Applications In mixed glial/neuronal cell cultures infected with HIV-1, endomorphin-1 potentiated the expression of HIV-1 in a bell-shaped dose-response manner. Endomorphin-1 (0.1 nM) consistently amplified the replication of HIV-1. In microglial cells, endomorphin-1 potentiated the expression of HIV-1, with maximal enhancement of HIV-1 expression at 10-10M.

Animal experiment [2, 3]:

Animal models Male ICR mice, adult female Sprague–Dawley rats

Dosage form i.c.v. injection, 5 min, 3.28 nM-16.38 nM, intrathecal injection

Application Endomorphin-1 inhibited the tail-flick (AD50 = 6.16 nM) and hot-plate responses (AD50 = 1.94 nM) in a dose-dependent manner at 5 min after i.c.v. injection. In rats, intrathecal injection of 1:10 and 1:100 times diluted EM1 antiserum significantly decreased the effect of 2 Hz electroacupuncture analgesia.

Other notes Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

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References:

- [1]. Peterson P K, Gekker G, Hu S, et al. Endomorphin-1 potentiates HIV-1 expression in human brain cell cultures: implication of an atypical μ -opoid receptor[J]. *Neuropharmacology*, 1999, 38(2): 273-278.
- [2]. Tseng L F, Narita M, Suganuma C, et al. Differential antinociceptive effects of endomorphin-1 and endomorphin-2 in the mouse[J]. *Journal of Pharmacology and Experimental Therapeutics*, 2000, 292(2): 576-583.
- [3]. Han Z, Jiang Y H, Wan Y, et al. Endomorphin-1 mediates 2 Hz but not 100 Hz electroacupuncture analgesia in the rat[J]. *Neuroscience letters*, 1999, 274(2): 75-78.

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