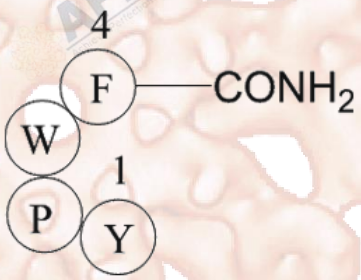
Product Data Sheet

Endomorphin-1

Cat. No.:	A1013
CAS No.:	189388-22-5
Formula:	C34H38N6O5
M.Wt:	610.67
Synonyms:	Tyr-Pro-Trp-Phe
Target:	Neuroscience
Pathway:	Neuroscience Peptides
Storage:	Desiccate at -20°C



Solvent & Solubility

In Vitro

⩾14.9 mg/mL in H2O; ⩾30.55 mg/mL in DMSO; ⩾47 mg/mL in EtOH

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	1.6375 mL	8.1877 mL	16.3755 mL
5 mM	0.3275 mL	1.6375 mL	3.2751 mL
10 mM	0.1638 mL	0.8188 mL	1.6375 mL

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

Biological Activity

Shortsummary	Agonist of μopioid receptors,highly potent and selective
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	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 conditions:	0.1 nM

	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.
In Vivo	**Animal experiment**	
	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
	Applications:	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.

Product Citations

See more customer validations on www.apexbt.com.

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.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt

of the product, follow the storage recommendations on the product data sheet.

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