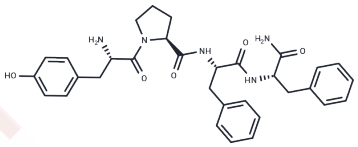
Data Sheet (Cat.No.T7218)

TargetMol

Endomorphin 2

Chemical Properties



CAS No. : 141801-26-5

Formula: C32H37N5O5

Molecular Weight: 571.67

Storage: Keep away from moisture
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Endomorphins-2 (EM-2) could decrease both the frequency and amplitude of the sEPSC of the motoneurons in lamina IX, which was reversed by the MOR antagonist CTOP. EM-2-IR fibers originated from primary afferent fibers form symmetric synaptic connections with motoneurons innervating skeletal muscles of the lower limbs in lamina IX of the spinal ventral horn and EM-2 might exert inhibitory effects on the activities of these motoneurons through both presynaptic and postsynaptic mechanisms.
Targets(IC50)	Opioid Receptor
In vivo	After surviving for 3 days, all the rats retrograde labeled by WGA-HRP were deeply anesthetized by injection of an overdose of sodium pentobarbital (100 mg/kg), and then perfused with 100 ml of 0.01 M PBS (pH 7.4), followed by 500 ml of a fixative consisting of 4% paraformaldehyde and 0.01% glutaraldehyde in 0.1 M PB (pH 7.4). The spinal cord were removed and stored in 0.1 M PB (pH 7.4) containing of 4% paraformaldehyde at 4° C for 2–4 h. The intact sections were chose for TMR and Endomorphin-2(EM-2) or MOR double staining. The sections were blocked with 10% normal goat serum in 0.01 M PBS (pH 7.4) and then incubated for 24 h with guinea pig anti-TMR (1:500) and rabbit anti-EM-2 (1:200) or rabbit anti-MOR (1:500) antibodies at room temperature (RT). After washing in 0.01 M PBS (pH 7.4), sections were incubated for 8 h at RT with: (1) biotinylated donkey anti-rabbit IgG (1:500) and Alexa594-conjugated donkey anti-guinea pig IgG (1:500) diluted with PBS-NDS (for TMR and EM-2 staining); (2) biotinylated donkey anti-rabbit IgG (1:500) and Alexa488-conjugated donkey anti-guinea pig IgG (1:500) diluted with PBS-NDS (for TMR and MOR staining). Then, after washing in 0.01 M PBS (pH 7.4), sections were incubated with FITC-Avidin (1:1,000) (for EM-2 staining) or Alexa594-Avidin (1:1,000) (for MOR staining) in 0.01 M PBS containing 0.5% Triton X-100 (PBS-X) for 3 h at RT. Finally, the sections were rinsed with 0.01 M PBS, mounted onto clean glass slides, air-dried and cover slipped with a mixture of 0.05 M PBS containing 50% (v/v) glycerin and 2.5% (w/v) triethylenediamine. Images were taken using a laser-scanning confocal microscope.

Solubility Information

Solubility	H2O: 132.5 mg/mL (231.78 mM),Sonication is recommended. DMSO: 10 mM,Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.7493 mL	8.7463 mL	17.4926 mL
5 mM	0.3499 mL	1.7493 mL	3.4985 mL
10 mM	0.1749 mL	0.8746 mL	1.7493 mL
50 mM	0.035 mL	0.1749 mL	0.3499 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Zhen-Yu W , Ya-Cheng L , Ban F , et al. Endomorphin-2 Decreases Excitatory Synaptic Transmission in the Spinal Ventral Horn of the Rat[J]. Frontiers in Neural Circuits, 2017, 11:55-.