

## Spinorphin

## Chemical Properties

CAS No. : 137201-62-8

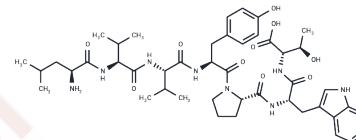
Formula: C45H64N8O10

Molecular Weight: 877

Keep away from moisture

Storage: 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	Spinorphin is a heptapeptide, and is a potent enkephalin-degrading enzymes inhibitor.
Targets(IC50)	Others,Opioid Receptor,Carboxypeptidase
In vitro	Spinorphin inhibited cytoplasmic Ca(2+) ([Ca(2+)]i) transients, evoked by depolarization and capsaicin selectively in medium and small cultured rat DRG neurons.?Spinorphin (10-300 M) inhibited the Ca(2+) signals in concentration dependant manner in small- and medium diameter DRG neurons.?Capsaicin produced [Ca(2+)]i responses only in small- and medium-sized DRG neurons, and pre-treatment with spinorphin significantly attenuated these [Ca(2+)]i responses[1].
In vivo	Spinorphin significantly inhibited the functions of polymorphonuclear neutrophils (PMNs) by suppressing the binding of fMLF to its receptor on PMNs. Further, this inhibitor suppressed the carrageenan-induced accumulation of PMN in mouse air pouches after intravenous administration. These results indicate that spinorphin may be an endogenous anti-inflammatory regulator. The possible role of spinorphin and its analog as regulators in pain and inflammation will be discussed[2].

## Solubility Information

Solubility	DMSO: 50 mg/mL (57.01 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	1.1403 mL	5.7013 mL	11.4025 mL
5 mM	0.2281 mL	1.1403 mL	2.2805 mL
10 mM	0.114 mL	0.5701 mL	1.1403 mL
50 mM	0.0228 mL	0.114 mL	0.2281 mL

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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

Ayar A , Ozcan M , Kemal Tuğrul Kuzgun, et al. Spinorphin inhibits membrane depolarization- and capsaicin-induced intracellular calcium signals in rat primary nociceptive dorsal root ganglion neurons in culture[J]. Journal of Receptor Research, 2015, 35(6):550-558.

YAMAMOTO,Y. Spinorphin as an endogenous inhibitor of enkephalin-degrading enzymes: roles in pain and inflammation.[J]. Current Protin & Peptide ence, 2002, 3(6):-.

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