Data Sheet (Cat.No.TP1813L)

TargetMol
A DRUG SCREENING EXPERT

Dynorphin A 1-10 acetate(79994-24-4 free base)

Chemical Properties

CAS No.:	TP1813L
Formula:	C59H95N19O14
Molecular Weight:	1294.53
Appearance:	N/A
Storage:	-20

Tyr-Gly-Gly-Phe-Leu-Arg-Arg-Ile-Arg-Pro(acetate salt)

Biological Description

Description	Dynorphin A (1-10) acetate is an endogenous opioid neuropeptide, binds to extracellular loop 2 of the κ-opioid receptor. Dynorphin A (1-10) also blocks NMDA-activated current with an IC50 of 42.0 μM.
In vitro	Dynorphin A (1-10) binds in the transmembrane domain of the κ-receptor[1]. The non-opioid actions of various forms of Dynorphin A (DynA) are examined on N-methyl-D-aspartate (NMDA) receptor channels in isolated rat trigeminal neurons using the whole-cell patch recording technique. All the dynorphins tested blocked NMDA-activated currents. The blocking actions are voltage-independent. The IC50 is 42.0 μM for DynA(1-10). To determine if shorter dynorphins have the similar blocking property, we examined the action of DynA(1-10) at different membrane potentials. DynA(1-10) blocks INMDA to a similar extent as the membrane potentials changed from -80 to +60 mV. Thus, despite a 160-fold difference in the apparent affinities, DynA(1-32) and DynA(1-10) both exert voltage-independent actions on NMDA receptors[2].

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.772 mL	3.862 mL	7.725 mL
5 mM	0.154 mL	0.772 mL	1.545 mL
10 mM	0.077 mL	0.386 mL	0.772 mL
50 mM	0.015 mL	0.077 mL	0.154 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 ℃ for 6 months; - 20 ℃ for 1 month. Please use it as soon as possible.

Reference

1. Paterlini G, et al. Molecular simulation of dynorphin A-(1-10) binding to extracellular loop 2 of the kappa-opioidreceptor. A model for receptor activation. J Med Chem. 1997 Sep 26;40(20):3254-62.

Inhibitors · Natural Compounds · Compound Libraries

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