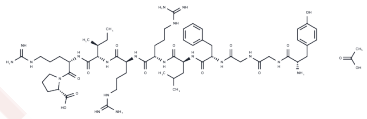
Data Sheet (Cat.No.TP1813L)

TargetMol

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

Chemical Properties



CAS No. :

Formula: C59H95N19O14

Molecular Weight: 1294.53

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	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.
Targets(IC50)	Opioid Receptor
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].

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7725 mL	3.8624 mL	7.7248 mL
5 mM	0.1545 mL	0.7725 mL	1.545 mL
10 mM	0.0772 mL	0.3862 mL	0.7725 mL
50 mM	0.0154 mL	0.0772 mL	0.1545 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

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.

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