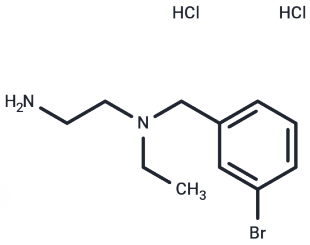
Data Sheet (Cat.No.T72662)

TargetMol

NMDAR/TRPM4-IN-2

Chemical Properties



CAS No. : 2243506-33-2

Formula: C11H19BrCl2N2

Molecular Weight: 330.092

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	NMDAR/TRPM4-IN-2 is a potent interfacial inhibitor of NMDAR/TRPM4 interaction. NMDAR/TRPM4-IN-2 protects against MCAO-induced brain damage and NMDA-induced retinal ganglion cell loss in mice.NMDAR/TRPM4-IN-2 has neuroprotective activity against NMDA-induced hippocampal neuronal cell death and mitochondrial dysfunction. NMDAR/TRPM4-IN-2 showed neuroprotective activity against NMDA-induced cell death and mitochondrial dysfunction in hippocampal neurons with an IC50 value of 2.1 μM.
Targets(IC50)	ERK,NMDAR,iGluR,TRP/TRPV Channel
In vitro	NMDAR/TRPM4-IN-2, also referred to as compound 8 within the concentration range of 0-10 μM, interrupts the interactions between GluN2A and GluN2B with TRPM4 in a dose-dependent fashion. Through its action, it abolishes the CREB shutdown pathway, concurrently reactivating the ERK1/2 pathway and stimulating IEG induction, while preserving the NMDARs' inherent ability to drive synaptic activity-led transcription enhancement.

Solubility Information

Solubility	DMSO: 250 mg/mL (757.36 mM),Sonication is recommended. H2O: 90 mg/mL (272.65 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: 10 mg/mL (30.29 mM),Solution. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 4 mg/mL (12.12 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.0295 mL	15.1474 mL	30.2948 mL
5 mM	0.6059 mL	3.0295 mL	6.059 mL
10 mM	0.3029 mL	1.5147 mL	3.0295 mL
50 mM	0.0606 mL	0.3029 mL	0.6059 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

Yan J, et al. Coupling of NMDA receptors and TRPM4 guides discovery of unconventional neuroprotectants. Science. 2020;370(6513):eaay3302.