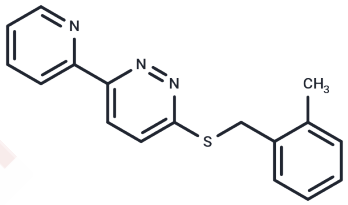
Data Sheet (Cat.No.T15728)

TargetMol

LDN-212320

Chemical Properties



CAS No. : 894002-50-7

Formula: C17H15N3S

Molecular Weight: 293.39

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	LDN-212320 (OSU-0212320) is a glutamate transporter EAAT2 activator. It also enhances EAAT2 levels by > 6 fold at concentrations < 5 μM after 24 h.
Targets(IC50)	transporter
In vitro	LDN/OSU-0212320 enhanced EAAT2 protein levels and glutamate uptake function but did not affect EAAT1 or EAAT3 protein levels and it also increased EAAT2 protein levels in a dose-dependent (EC50: 1.83 ± 0.27 μM) and time-dependent manner. LDN/OSU-0212320 treatment markedly prevented neuronal loss and degeneration, as assessed by MAP2 immunostaining [2].
In vivo	After LDN/OSU-0212320(a single i.p.; 40-mg/kg) treatment, EAAT2 protein levels and associated glutamate uptake increased by approximately 1.5- to 2-fold at 2 hours and by approximately 2- to 3-fold between 8 and 24 hours after injection. Even 72 hours after injection, an approximately 1.5-fold increase in EAAT2 protein levels could still be detected (data not shown). LDN/OSU-0212320–induced EAAT2 protein levels and glutamate uptake was dose-dependent [2].

Solubility Information

Solubility	DMSO: 50 mg/mL (170.42 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (6.82 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	3.4084 mL	17.0422 mL	34.0843 mL
5 mM	0.6817 mL	3.4084 mL	6.8169 mL
10 mM	0.3408 mL	1.7042 mL	3.4084 mL
50 mM	0.0682 mL	0.3408 mL	0.6817 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

Xing X, et al. Structure-activity relationship study of pyridazine derivatives as glutamate transporter EAAT2 activators. Bioorg Med Chem Lett. 2011 Oct 1;21(19):5774-7.
Luo R, Hu X, Li X, et al.Dysfunctional astrocyte glutamate uptake in the hypothalamic paraventricular nucleus contributes to visceral pain and anxiety-like behavior in mice with chronic pancreatitis.Glia.2024
Kong Q, et al. Small-molecule activator of glutamate transporter EAAT2 translation provides neuroprotection. J Clin Invest. 2014 Mar;124(3):1255-67.