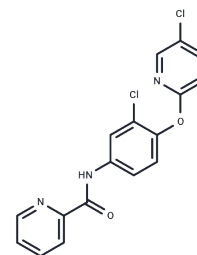


VU0422288

Chemical Properties

CAS No. : 1630936-95-6
Formula: C₁₇H₁₁Cl₂N₃O₂
Molecular Weight: 360.19
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	VU0422288 (ML396) is a potent orthosteric modulator of type III mGlu receptors (mGlu). VU0422288 shows inhibition of mGluR4, mGluR7, and mGluR8 in a calcium mobilization assay. VU0422288 can be used to study Rett syndrome (RTT).
Targets(IC50)	GluR
In vitro	In coronal slices containing the hippocampus, VU0422288 (1 μM; 5 minutes) enhances the reduction in slope of the field excitatory postsynaptic potentials (fEPSPs) induced by 30 μM LSP4-2022[1]. However, when administered alone for 10 minutes at a concentration of 1 μM, VU0422288 does not alter the slope of fEPSP, indicating that under stimulation conditions, mGlu7 does not possess reinforcing activity in Mecp2-/-y slices[1].
In vivo	In Mecp2+/- mice, VU0422288 (30 mg/kg; intraperitoneal injection; once daily for 17 days) rescues synaptic plasticity deficits and learning-memory phenotypes, reduces the frequency of respiratory pause, while showing no effect in Mecp2+/+ animals[1]. A single dose of VU0422288 (10 mg/kg; intraperitoneal injection) in adult male Sprague-Dawley rats exhibits a plasma/brain partition coefficient of 1.67, predicting a free brain concentration of approximately 40 nM[1].

Solubility Information

Solubility	DMSO: 3.61 mg/mL (10.02 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.7763 mL	13.8816 mL	27.7631 mL
5 mM	0.5553 mL	2.7763 mL	5.5526 mL
10 mM	0.2776 mL	1.3882 mL	2.7763 mL
50 mM	0.0555 mL	0.2776 mL	0.5553 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

Gogliotti RG, et al. mGlu7 potentiation rescues cognitive, social, and respiratory phenotypes in a mouse model of Rett syndrome. *Sci Transl Med.* 2017 Aug 16;9(403):eaai7459.

Jalan-Sakrikar N, et al. Identification of positive allosteric modulators VU0155094 (ML397) and VU0422288 (ML396) reveals new insights into the biology of metabotropic glutamate receptor 7. *ACS Chem Neurosci.* 2014 Dec 17;5(12):1221-37.

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