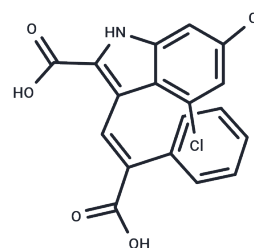


MDL 105519

Chemical Properties

CAS No. : 161230-88-2
Formula: C₁₈H₁₁Cl₂NO₄
Molecular Weight: 376.19
Appearance: no data available
Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year



Biological Description

Description	MDL 105519 is an effective antagonist of glycine binding to the NMDA receptor.
Targets(IC50)	Others
In vitro	MDL 105519 is approximately 10,000-fold selective for the glycine recognition site relative to the other receptor types investigated. MDL 105519 is an effective and selective ligand for the glycine recognition site that completely inhibit the binding of [3H]glycine to rat brain membranes (K _i : 10.9 nM). MDL 105519 inhibits NMDA-dependent responses, such as elevations of [3H]TCP binding in brain membranes, cyclic GMP accumulation in brain slices, and alterations in cytosolic Ca ²⁺ and Na ⁺ -Ca ²⁺ currents in cultured neurons. Its inhibition is non-competitive with respect to NMDA and could be nullified with D-serine.
In vivo	MDL 105519 acts as an NMDA receptor antagonist in vivo, effectively blocking harmaline-induced increases in cerebellar cyclic GMP levels through intravenous administration, demonstrating its biochemical antagonistic properties. It exhibits anxiolytic effects in rat separation-induced vocalization tests, with noticeable muscle-relaxant properties at reduced dosages. The compound's antagonism also correlates with anticonvulsant effects across various seizure models, including genetic, chemically induced, and electrically provoked. Although higher doses compromise rotorod performance, they do not influence mesolimbic dopamine turnover or affect prepulse inhibition of the startle reflex.

Solubility Information

Solubility	DMSO: 17 mg/mL (45.19 mM), Sonication and heating are recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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A DRUG SCREENING EXPERT

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6582 mL	13.2912 mL	26.5823 mL
5 mM	0.5316 mL	2.6582 mL	5.3165 mL
10 mM	0.2658 mL	1.3291 mL	2.6582 mL
50 mM	0.0532 mL	0.2658 mL	0.5316 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.

Reference

Baron BM, et al. Pharmacological characterization of MDL 105,519, an NMDA receptor glycine site antagonist. Eur J Pharmacol. 1997 Apr 4;323(2-3):181-92.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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