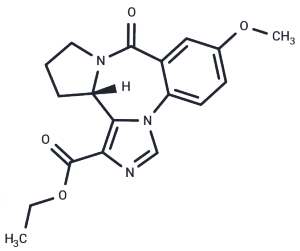
Data Sheet (Cat.No.TQ0151)

TargetMol

L-655708

Chemical Properties



CAS No. : 130477-52-0

Formula: C18H19N3O4

Molecular Weight: 341.36

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	L-655708 is a selective and highly potent GABAA receptor reverse agonist with a Ki value of 0.45 nM.
Targets(IC50)	GABA Receptor
In vitro	L655708, a potent and selective inverse agonist, targets the benzodiazepine site of GABAA receptors that contain the α5 subunit (Ki = 0.45 nM). It exhibits remarkable selectivity, with a 50-100-fold preference for GABAA receptors containing α1, α2, α3, or α6 subunits when combined with β3 and γ2. In a mouse hippocampal slice model, L655708 enhances long-term potentiation (LTP) and improves spatial learning. Notably, it does so without displaying proconvulsant activity.
In vivo	At an intraperitoneal administration of 0.7 mg/kg, L-655708 achieves 60-70% occupancy of α5 GABAA receptors, with minimal binding to GABAA receptors containing α1, α2, and α3 subunits. Furthermore, there are no significant off-target behavioral effects, such as sedation and motor impairment.

Solubility Information

Solubility	DMSO: 5 mg/mL (14.65 mM),Sonication is recommended. H2O: Insoluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.93 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	2.9295 mL	14.6473 mL	29.2946 mL
5 mM	0.5859 mL	2.9295 mL	5.8589 mL
10 mM	0.2929 mL	1.4647 mL	2.9295 mL
50 mM	0.0586 mL	0.2929 mL	0.5859 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

Saab BJ, et al. Short-term memory impairment after isoflurane in mice is prevented by the α5 γ-aminobutyric acid type A receptorinverse agonist L-655708. Anesthesiology. 2010 Nov;113(5):1061-1071.