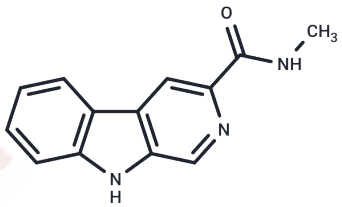
Data Sheet (Cat.No.T11277)

TargetMol

FG 7142

Chemical Properties



CAS No. : 78538-74-6

Formula: C13H11N3O

Molecular Weight: 225.25

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	FG 7142 (LSU-65) also modulates GABA-induced chloride flux at GABAA receptors expressing the α1 subunit (EC50= 137 nM). FG 7142 can increase tyrosine hydroxylation and cause upregulation of β-adrenoceptors in mouse cerebral cortex. FG 7142 , a non-selectively benzodiazepine inverse agonist, has high affinity for the α1 subunit-containing GABAA receptor (Ki=91 nM).
Targets(IC50)	GABA Receptor
In vitro	FG-7142 has a high efficacy in modulating GABA-induced chloride flux at GABAA receptors expressing the α1 subunit (EC50 = 137 nM) as compared to the other α subunits.FG-7142 has affinity for those expressing the α subunit, the Ki values are 91 nM; 330 nM; 492 nM and 2.150 μM for α1, α2,α3 and α5 subunits, respectively.
In vivo	FG-7142, administered via intraperitoneal injection at doses of 15 mg/kg, enhances tyrosine hydroxylase activity and dopamine turnover specifically in the medial prefrontal cortex and ventral tegmentum, without impacting mesolimbic or nigrostriatal regions. At doses between 15-30 mg/kg, it stimulates mesolimbocortical dopaminergic projections, resulting in elevated dopamine levels in the prefrontal cortex and nucleus accumbens in rats.

Solubility Information

Solubility	DMSO: 30 mg/mL (133.19 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 (8.88 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	4.4395 mL	22.1976 mL	44.3951 mL
5 mM	0.8879 mL	4.4395 mL	8.879 mL
10 mM	0.444 mL	2.2198 mL	4.4395 mL
50 mM	0.0888 mL	0.444 mL	0.8879 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

Cottone P, et al. FG 7142 specifically reduces meal size and the rate and regularity of sustained feeding in female rats: evidence that benzodiazepine inverse agonists reduce food palatability.Neuropsychopharmacology. 2007 May;32(5):1069-81. Epub 2006 Nov 1.