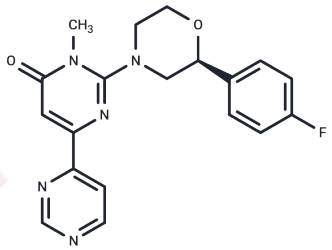
Data Sheet (Cat.No.T35560)

TargetMol

SAR502250

Chemical Properties



CAS No. : 503860-57-9

Formula: C19H18FN5O2

Molecular Weight: 367.38

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	SAR502250 is a potent, selective, ATP-competitive, orally active, and brain-penetrant GSK3 inhibitor with a human GSK-3β IC50 value of 12 nM, exhibiting antidepressant-like activity and being researched for potential application in Alzheimer's disease (AD) treatment.
Targets(IC50)	Others,GSK-3
In vitro	SAR502250 (0.01-1 μM; 36 h) mitigates Aβ25-35-induced cell death in rat embryonic hippocampal neurons[2].
In vivo	SAR502250, administered in varying dosages and methods, exhibits several notable effects in transgenic mice: it attenuates tau hyperphosphorylation in the cortex and spinal cord (1-100 mg/kg, single p.o.), improves cognitive deficits post-Aβ25-35 infusion (10-30 mg/kg, p.o. once daily for 7 weeks) in APP(SW)/Tau(VLW) mice, increases lever-presses in the IRT bin (49-96s) and reinforced responses (10-30 mg/kg, single p.o.), ameliorates chronic stress-induced coat degradation (30 mg/kg, i.p. once daily for 28 days), and decreases psychostimulant-induced hyperactivity (10-60 mg/kg, single p.o.)[2].

Solubility Information

Solubility	DMSO: 100 mg/mL (272.2 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: 3.3 mg/mL (8.98 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	2.722 mL	13.6099 mL	27.2198 mL
5 mM	0.5444 mL	2.722 mL	5.444 mL
10 mM	0.2722 mL	1.361 mL	2.722 mL
50 mM	0.0544 mL	0.2722 mL	0.5444 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

Fukunaga K, et, al. 2-(2-Phenylmorpholin-4-yl)pyrimidin-4(3H)-ones; a new class of potent, selective and orally active glycogen synthase kinase-3β inhibitors. Bioorg Med Chem Lett. 2013 Dec 15;23(24):6933-7.
Griebel G, et, al. The selective GSK3 inhibitor, SAR502250, displays neuroprotective activity and attenuates behavioral impairments in models of neuropsychiatric symptoms of Alzheimer's disease in rodents. Sci Rep. 2019 Dec 2;9(1):18045.