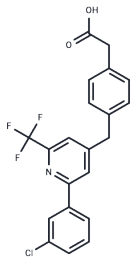
Data Sheet (Cat.No.T10590)

TargetMol

Zatolmilast

Chemical Properties



CAS No. : 1606974-33-7

Formula: C21H15ClF3NO2

Molecular Weight: 405.8

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	Zatolmilast (BPN14770) is an allosteric inhibitor of selective phosphodiesterase 4D (PDE4D; IC50s: 7.8 nM and 7.4 nM for PDE4D7 and PDE4D3).
Targets(IC50)	PDE
In vivo	BPN14770 increases brain cAMP increases phosphorylation of CREB and increases the production of brain-derived neurotrophic factor (BDNF) in the hippocampus [1]. BPN14770 (0.1-30 mg/kg; p.o.; 24 hours) provides cognitive benefit in the mouse novel object recognition at doses above 0.3 mg/kg [2].

Solubility Information

Solubility	DMSO: 260 mg/mL (640.71 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: 5 mg/mL (12.32 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	2.4643 mL	12.3213 mL	24.6427 mL
5 mM	0.4929 mL	2.4643 mL	4.9285 mL
10 mM	0.2464 mL	1.2321 mL	2.4643 mL
50 mM	0.0493 mL	0.2464 mL	0.4929 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

Ricciarelli R, et al. Memory-enhancing effects of GEBR-32a, a new PDE4D inhibitor holding promise for the treatment of Alzheimer's disease. Sci Rep. 2017 Apr 12;7:46320.
Gurney ME, et al. Design and Synthesis of Selective Phosphodiesterase 4D (PDE4D) Allosteric Inhibitors for the Treatment of Fragile X Syndrome and Other Brain Disorders. J Med Chem. 2019 May 23;62(10):4884-4901.