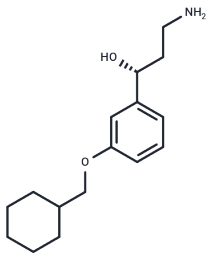
Data Sheet (Cat.No.T11188)

TargetMol

Emixustat

Chemical Properties



CAS No. : 1141777-14-1

Formula: C16H25NO2

Molecular Weight: 263.38

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	Emixustat, is an inhibitor of the visual cycle isomerase with an IC50 value of 4.4 nM in vitro. a novel visual cycle modulator.
Targets(IC50)	Others
In vitro	Emixustat strongly inhibits 11-cis-retinol production with an IC50 value of 232±3 nM. Emixustat potently inhibits isomerase activity in vitro (IC50=4.4 nM). Treatment of emixustat shows a concentration dependent reduction of 11-cis-ROL production .
In vivo	Pre-treatment with a single dose of emixustat (0.3 mg/kg) provides a 50% protective effect against light-induced photoreceptor cell loss, while higher doses (1-3 mg/kg) are nearly 100% effective. In Abca4-/- mice, chronic (3-month) emixustat treatment markedly reduces lipofuscin autofluorescence and lowers A2E levels by 60% (ED50=0.47 mg/kg). In the retinopathy of prematurity rodent model, emixustat administered during ischemia and reperfusion injury results in a 30% reduction in retinal neovascularization (ED50=0.46 mg/kg). Emixustat reduces the production of visual chromophore (11-cis retinal) in wild-type mice after a single oral dose (ED50=0.18 mg/kg). In albino mice, emixustat effectively prevents photoreceptor cell death caused by intense light exposure.

Solubility Information

Solubility	DMSO: 43 mg/mL (163.26 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7968 mL	18.984 mL	37.968 mL
5 mM	0.7594 mL	3.7968 mL	7.5936 mL
10 mM	0.3797 mL	1.8984 mL	3.7968 mL
50 mM	0.0759 mL	0.3797 mL	0.7594 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

Bavik C, et al. Visual Cycle Modulation as an Approach toward Preservation of Retinal Integrity. PLoS One. 2015 May 13;10(5):e0124940.

Kiser PD, et al. Catalytic mechanism of a retinoid isomerase essential for vertebrate vision. Nat Chem Biol. 2015 Jun;11(6):409-15.