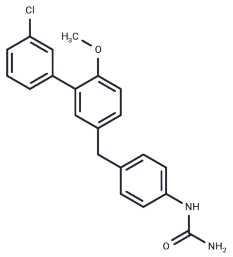
Data Sheet (Cat.No.T5474)

D159687

Chemical Properties



CAS No. : 1155877-97-6

Formula: C21H19ClN2O2

Molecular Weight: 366.84

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	D159687 is a selective PDE4D inhibitor,had a procognitive profile as it improved memory in the novel object recognition test but had no antidepressant or anxiolytic benefit.
Targets(IC50)	PDE
In vitro	D159687 induced a transient increase in CREB phosphorylation which peaked at 6 hrs after treatment (F (3, 20) = 3.731, P = 0.0425). CREB phosphorylation was optimal at 1 μM (F (3, 20) = 4.194, P = 0.0302).
Cell Research	cAMP concentrations were measured using the enzyme-linked immunosorbent assay.? On the day of treatment, the attached HT-22 cells were washed with warm phosphate buffer saline and then incubated for 10 min with PBS supplemented with various concentrations of D159687 and further for 10 min with 10 nM isoproterenol in the system52.?After incubation, PBS containing the drugs was removed and the plates were let dry roughly before 200 μl HCl (0.1 M) was added to each well to lyse the cells.?Cell lysates were collected into Eppendorf tubes and centrifuged at 800 g for 15 min. Supernatants were collected for immediate assay or stored frozen for assay later using the cAMP complete ELISA kit according to the assay protocol.

Solubility Information

Solubility	DMSO: 150 mg/mL (408.9 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: 4 mg/mL (10.9 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	2.726 mL	13.6299 mL	27.2598 mL
5 mM	0.5452 mL	2.726 mL	5.452 mL
10 mM	0.2726 mL	1.363 mL	2.726 mL
50 mM	0.0545 mL	0.2726 mL	0.5452 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

Zhang C, et al. Comparison of the Pharmacological Profiles of Selective PDE4B and PDE4D Inhibitors in the Central Nervous System. Sci Rep. 2017 Jan 5;7:40115.