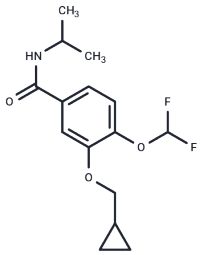
Data Sheet (Cat.No.T39341)

TargetMol

FCPR03

Chemical Properties



CAS No. : 1917347-65-9

Formula: C15H19F2NO3

Molecular Weight: 299.31

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	FCPR03 is a selective inhibitor of phosphodiesterase 4 (PDE4) with IC50s of 31 nM, 47 nM, and 60 nM for PDE4B1, PDE4D7, and PDE4 catalytic domain, respectively. FCPR03 has neuroprotective, anti-inflammatory, and antidepressant-like effects.
Targets(IC50)	PDE
In vitro	FCPR03 displays at least 2100-fold selectivity over other PDEs (PDE1-3 and PDE5-11). In HT-22 cells, FCPR03 (5, 10, and 20 μM) increases cell viability under the oxygen-glucose deprivation (OGD) induced condition in a dose-dependent manner. FCPR03 (20 μM) increases the levels of phosphorylated AKT, GSK-3β, and β-catenin. FCPR03 (20 μM) protects against OGD-induced cellular apoptosis in both HT-22 cells and cortical neurons. The levels of mitochondrial membrane potential (MMP) and ROS are restored by FCPR03. FCPR03 (10 μM) shows significant protective effects[2].
In vivo	In adult male Sprague-Dawley rats following cerebral ischemia-reperfusion, FCPR03 increases the levels of phosphorylated AKT, GSK3β and β-catenin within the ischemic penumbra. In rats following MCAO, FCPR03 (1.25, 2.5, 5 mg/kg; i.p.) reduces the infarct volume and improves neurobehavioral outcomes[2].

Solubility Information

Solubility	DMSO: 95 mg/mL (317.4 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.341 mL	16.7051 mL	33.4102 mL
5 mM	0.6682 mL	3.341 mL	6.682 mL
10 mM	0.3341 mL	1.6705 mL	3.341 mL
50 mM	0.0668 mL	0.3341 mL	0.6682 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

Zheng-Qiang Zou, et al. Novel Phosphodiesterase 4 Inhibitor FCPR03 Alleviates Lipopolysaccharide-Induced Neuroinflammation by Regulation of the cAMP/PKA/CREB Signaling Pathway and NF- κ B Inhibition. J Pharmacol Exp Ther. 2017 Jul;362(1):67-77.

Bingtian Xu, et al. FCPR03, a Novel Phosphodiesterase 4 Inhibitor, Alleviates Cerebral ischemia/reperfusion Injury Through Activation of the AKT/GSK3β/ β-catenin Signaling Pathway. Biochem Pharmacol. 2019 May;163:234-249.