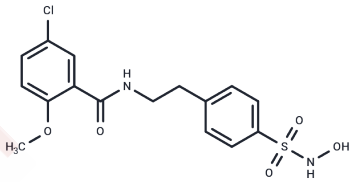
Data Sheet (Cat.No.T38106)

TargetMol

JC-171

Chemical Properties



CAS No. : 2112809-98-8

Formula: C16H17ClN2O5S

Molecular Weight: 384.83

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	JC-171, a selective inhibitor of the NLRP3 inflammasome, effectively inhibits LPS/ATP-induced interleukin-1β (IL-1β) release from J774A.1 macrophages with an IC50 of 8.45 μM[1].
Targets(IC50)	Others,NOD-like Receptor (NLR)
In vitro	JC-171 (0-100 μM) inhibits NLRP3 inflammasome activation and IL-1β production in primary macrophages in a dose-dependent manner, with cell viability assessed using J774A.1 murine macrophage cells[1].
In vivo	JC-171 treatment delays progression and reduces the severity of experimental autoimmune encephalomyelitis (EAE) in mice[1]. Animal Model: Mice immunized subcutaneously with 200 μg Myelin oligodendrocyte glycoprotein (MOG) 35-55 peptide emulsified in Complete Freund's Adjuvant (CFA) on day 0, followed by injection of 200 ng of pertussis toxin.

Solubility Information

Solubility	DMSO: 250 mg/mL (649.64 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 (8.58 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	2.5986 mL	12.9928 mL	25.9855 mL
5 mM	0.5197 mL	2.5986 mL	5.1971 mL
10 mM	0.2599 mL	1.2993 mL	2.5986 mL
50 mM	0.052 mL	0.2599 mL	0.5197 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

Chunqing Guo, et al. Development and Characterization of a Hydroxyl-Sulfonamide Analogue, 5-Chloro-N-[2-(4-hydroxysulfamoyl-phenyl)-ethyl]-2-methoxy-benzamide, as a Novel NLRP3 Inflammasome Inhibitor for Potential Treatment of Multiple Sclerosis. ACS Chem Neurosci. 2017 Oct 18;8(10):2194-2201.