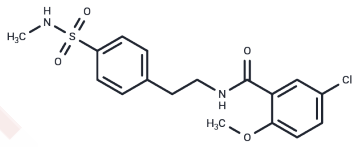
Data Sheet (Cat.No.T25548)

TargetMol

JC124

Chemical Properties



CAS No. : 1638611-48-9

Formula: C17H19ClN2O4S

Molecular Weight: 382.86

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	JC124 is an inhibitor of NLRP3 Inflammasome and exhibits neuroprotective and anti-inflammatory activities.
Targets(IC50)	NOD-like Receptor (NLR),NOD
In vitro	JC124 selectively inhibits NLRP3 inflammasome formation and activates caspase-1, and reduces IL-1β[1].
In vivo	In adult male Sprague-Dawley rats bearing traumatic brain injury, intraperitoneal administration of JC124 (100mg/kg) reduces the number of injury-induced degenerating neurons, inflammatory cell response, and cortical lesion volume. JC124 decreases the expression of NLRP3, IL-1 beta, TNFα, ASC, iNOS, and caspase-1[1].

Solubility Information

Solubility	DMSO: 225 mg/mL (587.68 mM),when pH is adjusted to 3 with HCl. 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 (13.06 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	2.6119 mL	13.0596 mL	26.1192 mL
5 mM	0.5224 mL	2.6119 mL	5.2238 mL
10 mM	0.2612 mL	1.306 mL	2.6119 mL
50 mM	0.0522 mL	0.2612 mL	0.5224 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

Fulp J, et al. Structural Insights of Benzenesulfonamide Analogues as NLRP3 Inflammasome Inhibitors: Design, Synthesis, and Biological Characterization. J Med Chem. 2018 Jun 18.
Yin J, et al. NLRP3 Inflammasome Inhibitor Ameliorates Amyloid Pathology in a Mouse Model of Alzheimer's Disease. Mol Neurobiol. 2018 Mar;55(3):1977-1987.
Ram Kuwar, et al. A novel small molecular NLRP3 inflammasome inhibitor alleviates neuroinflammatory response following traumatic brain injury. J Neuroinflammation. 2019 Apr 11;16(1):81.