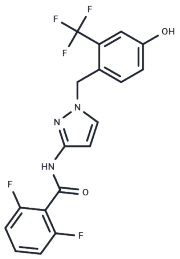
Data Sheet (Cat.No.T15423)

TargetMol

GSK-7975A

Chemical Properties



CAS No. : 1253186-56-9

Formula: C18H12F5N3O2

Molecular Weight: 397.3

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	GSK-7975A is a potent, orally available inhibitor of the Calcium Release-Activated Calcium (CRAC) channel.
Targets(IC50)	Calcium Channel
In vitro	GSK-7975A inhibits toxin-induced activation of ORAI1 and/or activation of Ca2+ currents after Ca2+ release, in a concentration-dependent manner, in mouse and human pancreatic acinar cells (inhibition >90% of the levels observed in control cells). GSK-7975A inhibits mediator release from mast cells, and pro-inflammatory cytokine release from T-cells in a variety species and it also completely inhibits calcium influx through CRAC channels. This leads to inhibition of the release of mast cell mediators and T-cell cytokines from multiple human and rat preparations. GSK-7975A decreases FcεRI-dependent Ca2+ influx and 3 μM GSK-7975A decreases the release of histamine, leukotriene C4, and cytokines (IL-5/-8/-13 and TNFα) by up to 50%[1]. Mast cells from guinea-pig and mouse preparations are not inhibited by GSK-7975A; however cytokine release is fully blocked from T-cells in a mouse preparation[2]. GSK-7975A also prevents activation of the necrotic cell death pathway in mouse and human pancreatic acinar cells[3].
In vivo	GSK-7975A obviously decreses increases in serum amylase, IL6, and pancreatic MPO levels; lung MPO is reduced significantly by low dose only. GSK-7975A inhibits local and systemic features of acute pancreatitis in TLCS-AP, CER-AP, FAEE-AP, in dose- and time-dependent manners. GSK-7975A markedly decreases pancreatic histopathology in TLCS-AP, CER-AP, and FAEE-AP[3].

Solubility Information

Solubility	DMSO: 250 mg/mL (629.25 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 (8.31 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	2.517 mL	12.5849 mL	25.1699 mL
5 mM	0.5034 mL	2.517 mL	5.034 mL
10 mM	0.2517 mL	1.2585 mL	2.517 mL
50 mM	0.0503 mL	0.2517 mL	0.5034 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

Ashmole I, et al. CRACM/Orai ion channel expression and function in human lung mast cells. J Allergy Clin Immunol. 2012 Jun;129(6):1628-35.e2.

Rice LV, et al. Characterization of selective Calcium-Release Activated Calcium channel blockers in mast cells and T-cells from human, rat, mouse and guinea-pig preparations. Eur J Pharmacol. 2013 Mar 15;704(1-3):49-57.

Wen L, et al. Inhibitors of ORAI1 Prevent Cytosolic Calcium-Associated Injury of Human Pancreatic Acinar Cells and Acute Pancreatitis in 3 Mouse Models. Gastroenterology. 2015 Aug;149(2):481-92.e7.