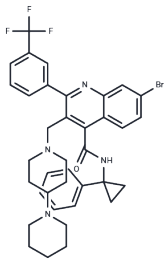
Data Sheet (Cat.No.T5640)

TargetMol

GSK2193874

Chemical Properties



CAS No. : 1336960-13-4

Formula: C37H38BrF3N4O

Molecular Weight: 691.62

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	GSK2193874 was identified as a selective, orally active TRPV4 blocker.
Targets(IC50)	TRP/TRPV Channel
In vitro	GSK2193874 was identified as a selective, orally active TRPV4 blocker that inhibits Ca(2+) influx through recombinant TRPV4 channels and native endothelial TRPV4 currents[1,2].
In vivo	In isolated rodent and canine lungs, TRPV4 blockade prevented the increased vascular permeability and resultant pulmonary edema associated with elevated PVP. ?In both acute and chronic HF models, GSK2193874 pretreatment inhibited the formation of pulmonary edema and enhanced arterial oxygenation[2].
Animal Research	Adult male Sprague-Dawley rats (n = 7 to 8 per group) were treated with vehicle (6% Cavitron) or GSK2193874 (30 mg/kg/day) via oral gavage for at least 4 days before osmotic challenges.?Rats underwent acute and chronic hyper- and hypo-osmotic challenges.Sprague-Dawley (control, n = 18) and spontaneously hypertensive rats (n = 11) were implanted with Data Sciences International (DSI) radiotelemetry transmitters.? Rats were dosed with GSK2193874, and data were captured with DSI receivers and analyzed with Microsoft Excel[2].

Solubility Information

Solubility	DMSO: 81.67 mg/mL (118.09 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 (5.78 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	1.4459 mL	7.2294 mL	14.4588 mL
5 mM	0.2892 mL	1.4459 mL	2.8918 mL
10 mM	0.1446 mL	0.7229 mL	1.4459 mL
50 mM	0.0289 mL	0.1446 mL	0.2892 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

Cheung M , Bao W , Behm D J , et al. Discovery of GSK2193874: An Orally Active, Potent, and Selective Blocker of Transient Receptor Potential Vanilloid 4[J]. ACS Medicinal Chemistry Letters, 2017:acsmedchemlett.7b00094.
Thorneloe K S , Cheung M , Bao W , et al. An Orally Active TRPV4 Channel Blocker Prevents and Resolves Pulmonary Edema Induced by Heart Failure[J]. Science Translational Medicine, 2012, 4(159):159ra148-159ra148.