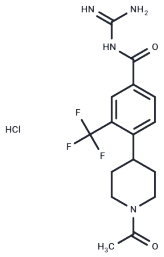
Data Sheet (Cat.No.T23800)

TargetMol

BI-9627 hydrochloride

Chemical Properties



CAS No. : 1422252-46-7

Formula: C16H20ClF3N4O2

Molecular Weight: 392.8

Storage: Keep away from moisture
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	BI-9627 hydrochloride is a highly potent Na^+/H^+ exchanger 1 (NHE1) inhibitor. In intracellular pH recovery assays and human platelet swelling assays, its IC_{50} values are 6 nM and 31 nM, respectively. It shows more than 30-fold selectivity over NHE2 and has no significant inhibitory effect on NHE3. BI-9627 hydrochloride can reduce the autophagy level of HTR-8/SVneo cells, significantly decrease the intracellular pH of human sperm, partially reverse the effect of DMA, and prolong the Ca^{2+} recovery time in KO hiPSC-CMs. BI-9627 hydrochloride has a low risk of drug-drug interactions, exhibits favorable pharmacokinetic properties in rats and dogs, and demonstrates potent activity in an ex vivo heart model of ischemia-reperfusion injury.
Targets(IC50)	Autophagy,Sodium Channel

Solubility Information

Solubility	DMSO: 80 mg/mL (203.67 mM),Sonication is recommended. H2O: 3.33 mg/mL (8.48 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.5458 mL	12.7291 mL	25.4582 mL
5 mM	0.5092 mL	2.5458 mL	5.0916 mL
10 mM	0.2546 mL	1.2729 mL	2.5458 mL
50 mM	0.0509 mL	0.2546 mL	0.5092 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

Chen, M., et al., (2023). An abnormal LPA/LPAR1-NHE1 axis leads to the autophagy deficiency of trophoblast cells in recurrent spontaneous abortion. Reproduction(Cambridge, England), 166(5), 357-368.
Liang, M., et al., (2024). Flagellar pH homeostasis mediated by Na+/H+ exchangers regulates human sperm functions through coupling with CatSper and Ksper activation. Human reproduction (Oxford, England), 39(4), 674-688.
Li, S., et al., (2024). Mitochondrial transplantation rescues Ca2+ homeostasis imbalance and myocardial hypertrophy in SLC25A3-related hypertrophic cardiomyopathy.Cell reports, 43(12), 115065.
Huber JD, et al. Identification of a potent sodium hydrogen exchanger isoform 1 (NHE1) inhibitor with a suitable profile for chronic dosing and demonstrated cardioprotective effects in a preclinical model of myocardial infarction in the rat. J Med Chem. 2012;55(16):7114-7140.