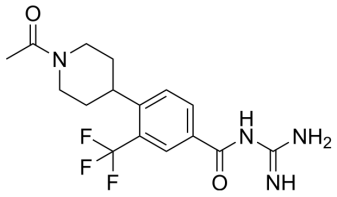
BI-9627

Cat. No.:	HY-18071
CAS No.:	1204329-34-9
Molecular Formula:	$C_{16}H_{19}F_3N_4O_2$
Molecular Weight:	356.34
Target:	Na+/H+ Exchanger (NHE)
Pathway:	Membrane Transporter/Ion Channel
Storage:	Powder -20°C 3 years 4°C 2 years In solvent -80°C 6 months -20°C 1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (280.63 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.8063 mL	14.0315 mL	28.0631 mL
	5 mM	0.5613 mL	2.8063 mL	5.6126 mL
	10 mM	0.2806 mL	1.4032 mL	2.8063 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (5.84 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

BI-9627 is potent sodium-hydrogen exchanger isoform 1 (NHE1) inhibitor, with IC_{50}s of 6 and 31 nM in intracellular pH recovery (pHi) and human platelet swelling assays, respectively. BI-9627 displays >30-fold selectivity against NHE2 and with no measurable inhibitory activity against the NHE3 isoform. BI-9627 shows low DDI (agent-agent interaction) potential, excellent pharmacokinetics in rat and dog, and remarkably potent activity in the isolated heart model of ischemia-reperfusion injury[1].

IC_{50} & Target

IC50: 6 nM (NHE1 in intracellular pH recovery assay), 31 nM (NHE1 in human platelet swelling assay)[1]

CUSTOMER VALIDATION

- Hum Reprod. 2024 Feb 14:deae020.

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REFERENCES

[1]. Huber JD, et al. Identification of a potent sodium hydrogen exchanger isoform 1 (NHE1) inhibitor with a suitableprofile for chronic dosing and demonstrated cardioprotective effects in a preclinical model of myocardial infarction in the rat. J Med Chem. 2012 Aug 23;55(16):7114-40.

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