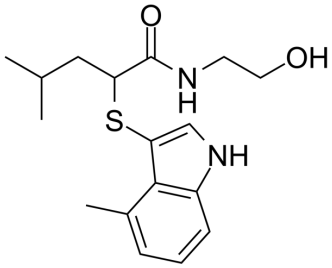
S3969

Cat. No.:	HY-112472
CAS No.:	1027997-01-8
Molecular Formula:	$C_{17}H_{24}N_2O_2S$
Molecular Weight:	320.45
Target:	Sodium Channel
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 (312.06 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.1206 mL	15.6031 mL	31.2061 mL
	5 mM	0.6241 mL	3.1206 mL	6.2412 mL
	10 mM	0.3121 mL	1.5603 mL	3.1206 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: ≥ 2.5 mg/mL (7.80 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.80 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

S3969 is a potent and reversible activator of the human epithelial sodium channel (hENaC). The apparent EC_{50} for S3969 activation of hENaC is 1.2 μm[1].

In Vitro

S3969 fully and reversibly activates hENaC in heterologous cells. S3969 activates δβγ, αβγ, α2βγ, δ2βγ, and αβG37Sγ hENaC with EC_{50}s of 1.2±0.2 μM, 1.2±0.1 μM, 1.2±0.5, 0.4±0.1,and 1.2±0.4 μM[1].
S3969 does not activate αβγ mouse ENaC (mENaC) at concentrations yielding maximal activation of αβγ hENaC or δβγ hENaC. Weak αβγ mENaC activation was observed at high concentrations of S3969 (100-300 μm)[1].

S3969 exhibits high efficacy (600-700% hENaC activation at 30 μm) as well as potency on wild-type hENaC (apparent EC_{50} ~1 μm for αβγ hENaC and δβγ hENaC but not αβγ mENaC) [1].
ENaC-activator S3969 (10 μM) stimulates αF61L mutant ENaC more than wild-type ENaC[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Min Lu, et al. Small molecule activator of the human epithelial sodium channel. J Biol Chem. 2008 May 2;283(18):11981-94.

[2]. Regina Huber, et al. Functional characterization of a partial loss-of-function mutation of the epithelial sodium channel (ENaC) associated with atypical cystic fibrosis. Cell Physiol Biochem. 2010;25(1):145-58.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA