S1R agonist 1 hydrochloride

Cat. No.: HY-149803A

CAS No.: 242487-82-7

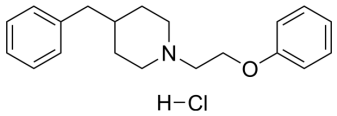
Molecular Formula: $C_{20}H_{26}ClNO$

Molecular Weight: 331.88

Target: Sigma Receptor

Pathway: Neuronal Signaling

Storage: -20°C, sealed storage, away from moisture
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (301.31 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	3.0131 mL	15.0657 mL	30.1314 mL
	5 mM	0.6026 mL	3.0131 mL	6.0263 mL
	10 mM	0.3013 mL	1.5066 mL	3.0131 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 (7.53 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (7.53 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (7.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

S1R agonist 1 (Compound 6b) hydrochloride is a selective S1R agonist with K_is of 0.93 nM and 72 nM for S1R and S2R, respectively. S1R agonist 1 hydrochloride exhibits neuroprotection against ROS and NMDA-induced neurotoxicity[1].

IC_{50} & Target

Ki: 0.93 nM and 72 nM for S1R and S2R[1]

In Vitro

S1R agonist 1 (Compound 6b; 0.1-5 μM) hydrochloride significantly increases the nerve growth factor (NGF) induced neurite outgrowth at all the tested concentrations in a dose-dependent manner in PC12 cell lines[1].
S1R agonist 1 (24 h) hydrochloride significantly prevents cell damage induced by Rotenone (HY-B1756) when tested at the concentration of 1 μM in SHSY5Y cells[1].

	S1R agonist 1 (0.1-5 μM; 24 h) hydrochloride demonstrates a neuroprotective effect against NMDA stimuli in SHSY5Y cells[1]. S1R agonist 1 (0-10 μM; 24-72 h) hydrochloride shows no cytotoxicity against A549, LoVo and Panc-1 cells[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	S1R agonist 1 (Compound 6b; 0.1-50 μM; 120 h) hydrochloride induces the death of 4 Zebrafish embryos out of 8 at 10 μM[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Linciano P, et al. Novel S1R agonists counteracting NMDA excitotoxicity and oxidative stress: A step forward in the discovery of neuroprotective agents. Eur J Med Chem. 2023 Mar 5;249:115163.

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