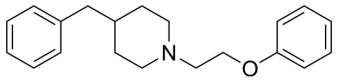
S1R agonist 1

Cat. No.:	HY-149803
CAS No.:	193354-70-0
Molecular Formula:	$C_{20}H_{25}NO$
Molecular Weight:	295.42
Target:	Sigma Receptor
Pathway:	Neuronal Signaling
Storage:	Pure form -20°C 3 years In solvent -80°C 6 months -20°C 1 month



BIOLOGICAL ACTIVITY

Description	S1R agonist 1 (Compound 6b) is a selective S1R agonist with K_is of 0.93 nM and 72 nM for S1R and S2R, respectively. S1R agonist 1 exhibits neuroprotection against ROS and NMDA-induced neurotoxicity[1].	
IC_{50} & Target	Sigma 1 Receptor 0.93 nM (Ki)	Sigma 2 Receptor 72 nM (Ki)
In Vitro	S1R agonist 1 (Compound 6b; 0.1-5 μM) 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) 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) demonstrates a neuroprotective effect against NMDA stimuli in SHSY5Y cells[1]. S1R agonist 1 (0-10 μM; 24-72 h) 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) 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.

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