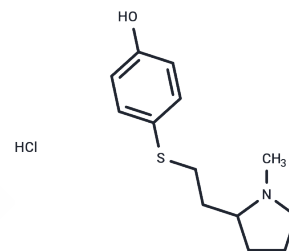


SIB-1553A hydrochloride

Chemical Properties

CAS No. :	191611-89-9
Formula:	C ₁₃ H ₂₀ ClNOS
Molecular Weight:	273.82
Storage:	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	SIB-1553A hydrochloride is an orally available, selective nicotinic acetylcholine receptor agonist and a selective neuronal nAChR ligand. SIB-1553A hydrochloride enhances cognition and may be useful in the study of Alzheimer's disease and cognitive impairment.
Targets(IC50)	AChR
In vitro	In calcium flux assays, compared to nicotine, SIB-1553A hydrochloride (0.1-5 μ M) exhibits higher selectivity in both potency and efficacy towards β 4 subunits containing recombinant hnAChRs (α 2 β 4, α 3 β 4, and α 4 β 4) over β 2 subunits containing nAChRs (α 4 β 2 and α 3 β 2)[1].
In vivo	In Male Sprague-Dawley rats (200-250 g), SIB-1553A hydrochloride (1, 2, 4, 10, 20, and 40 mg/kg; s.c) induced hippocampal ACh release[2].

Solubility Information

Solubility	H ₂ O: 20 mg/mL (73.04 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.652 mL	18.2602 mL	36.5203 mL
5 mM	0.7304 mL	3.652 mL	7.3041 mL
10 mM	0.3652 mL	1.826 mL	3.652 mL
50 mM	0.073 mL	0.3652 mL	0.7304 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

- Rao TS, et al. In vitro pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride (SIB-1553A), a nicotinic acetylcholine receptor ligand. *Brain Res.* 2003 Aug 15;981(1-2):85-98.
- Rao TS, et al. In vivo pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidinyl)ethyl]thiophenol hydrochloride (SIB-1553A), a novel cholinergic ligand: microdialysis studies. *Brain Res.* 2003 Oct 3;986(1-2):71-81.
- Rao TS, et al. In vivo pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidinyl)ethyl]thiophenol hydrochloride (SIB-1553A), a novel cholinergic ligand: microdialysis studies. *Brain Res.* 2003 Oct 3;986(1-2):71-81.

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