

SIB-1553A

## Chemical Properties

CAS No.:	191611-89-9
Formula:	C <sub>13</sub> H <sub>20</sub> CINOS
Molecular Weight:	273.82
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).

## Biological Description

Description	SIB-1553A is an orally bioavailable nicotinic acetylcholine receptors agonist. SIB-1553A is also a selective neuronal nAChR ligand. SIB-1553A is a cognitive enhancer and has therapeutic potential for the symptomatic treatment of Alzheimer's disease and other cognitive disorders.
Targets(IC <sub>50</sub> )	Others: None
In vitro	SIB-1553A displaces the binding of [H]nicotine (NIC) to the rat brain nAChRs (IC <sub>50</sub> : 110 nM). SIB-1553A (0.1-5 µM) displays greater selectivity for beta4-subunit-containing recombinant hnAChRs vs. beta2-subunit-containing nAChRs both in terms of efficacy and potency in calcium flux assays [1][2].
In vivo	SIB-1553A (1-40 mg/kg; s.c.) yields dose-dependent increases in ACh levels [3].

## Solubility Information

Solubility	< 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	18.26 mL	36.52 mL
5 mM	0.73 mL	3.652 mL	7.304 mL
10 mM	0.365 mL	1.826 mL	3.652 mL
50 mM	0.073 mL	0.365 mL	0.73 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

### Reference

1. Vernier JM, et al. 4-[[2-(1-Methyl-2-pyrrolidiny)ethyl]thio]phenol hydrochloride (SIB-1553A): a novel cognitive enhancer with selectivity for neuronal nicotinic acetylcholine receptors. J Med Chem. 1999 May 20;42(10):1684-6.
2. Rao TS, et al. In vitro pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidiny)ethyl]thio]phenol hydrochloride (SIB-1553A), a nicotinic acetylcholine receptor ligand. Brain Res. 2003 Aug 15;981(1-2):85-98.
3. Rao TS, et al. In vivo pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidiny)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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