

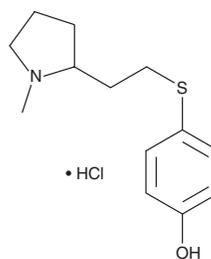
# PRODUCT INFORMATION



## SIB 1553A (hydrochloride)

Item No. 14973

**CAS Registry No.:** 191611-89-9  
**Formal Name:** 4-[[2-(1-methyl-2-pyrrolidinyl)ethyl]thio]-phenol, monohydrochloride  
**MF:** C<sub>13</sub>H<sub>19</sub>NOS • HCl  
**FW:** 273.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 229, 255 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

SIB 1553A (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the SIB 1553A (hydrochloride) in the solvent of choice, which should be purged with an inert gas. SIB 1553A (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide. The solubility of SIB 1553A (hydrochloride) in these solvents is approximately 10, 20, and 25 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of SIB 1553A (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of SIB 1553A (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

SIB 1553A is an agonist of nicotinic acetylcholine receptors (nAChRs) that displays selectivity for β4 subunit-containing receptors.<sup>1</sup> Formulations containing SIB 1553A improve attentional function and performance in spatial and non-spatial working memory tasks in animals.<sup>1-3</sup>

### References

1. Bontempi, B., Whelan, K.T., Risbrough, V.B., *et al.* SIB-1553A, (+/-)-4-[[2-(1-methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride, a subtype-selective ligand for nicotinic acetylcholine receptors with putative cognitive-enhancing properties: Effects on working and reference memory performances in aged rodents and nonhuman primates. *J. Pharmacol. Exp. Ther.* **299(1)**, 297-306 (2001).
2. Schneider, J.S., Tinker, J.P., Menzaghi, F., *et al.* The subtype-selective nicotinic acetylcholine receptor agonist SIB-1553A improves both attention and memory components of a spatial working memory task in chronic low dose 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine-treated monkeys. *J. Pharmacol. Exp. Ther.* **306(1)**, 401-406 (2003).
3. Terry, A.V., Jr., Risbrough, V.B., Buccafusco, J.J., *et al.* Effects of (+/-)-4-[[2-(1-methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride (SIB-1553A), a selective ligand for nicotinic acetylcholine receptors, in tests of visual attention and distractibility in rats and monkeys. *J. Pharmacol. Exp. Ther.* **301(1)**, 284-292 (2002).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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