TOCRIS
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Print Date: Jan 14th 2016

Certificate of Analysis

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Product Name: **SIB 1553A hydrochloride** **Catalog No.: 4764** **Batch No.: 1**

CAS Number: 191611-89-9

IUPAC Name: (±)-4-[[2-(1-Methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{13}H_{19}NOS.HCl$

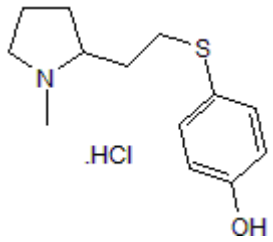
Batch Molecular Weight: 273.82

Physical Appearance: White solid

Solubility: water to 100 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

TLC: R_f = 0.1 (Dichloromethane:Methanol [9:1])

HPLC: Shows 99.4% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	57.02	7.36	5.12
Found	57.05	7.29	5.13

bio-techne.com
info@bio-techne.com
techsupport@bio-techne.com

North America
Tel: (800) 343 7475

China
info.cn@bio-techne.com
Tel: +86 (21) 52380373

Europe Middle East Africa
Tel: +44 (0)1235 529449

Rest of World
www.tocris.com/distributors
Tel:+1 612 379 2956

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CAS Number: 191611-89-9

IUPAC Name: (±)-4-[[2-(1-Methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride

Description:

Nicotinic acetylcholine receptor (nAChR) agonist. Displays selectivity for β4 subunit-containing receptors. Stimulates acetylcholine levels and other neurotransmitters relevant for cognitive processes. Improves attention deficits and memory performance in a Parkinson's disease model.

Physical and Chemical Properties:

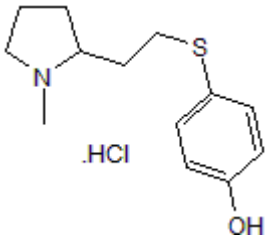
Batch Molecular Formula: $C_{13}H_{19}NOS.HCl$

Batch Molecular Weight: 273.82

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

water to 100 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Vernier *et al* (1999) 4-[[2-(1-Methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride (SIB-1553A): a novel cognitive enhancer with selectivity for neuronal nicotinic acetylcholine receptors. J.Med.Chem. ***42*** 1684. PMID: 10346920.

Rao *et al* (2003) In vitro pharmacological characterization of (+/-)-4-[2-(1-methyl-2-pyrrolidinyl)ethyl]thio]phenol hydrochloride (SIB-1553A), a nicotinic acetylcholine receptor ligand. Brain Res. ***981*** 85. PMID: 12885429.

Schneider *et al* (2003) 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*** 401. PMID: 12721323.