

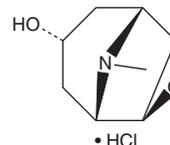
PRODUCT INFORMATION



Scopine (hydrochloride)

Item No. 27052

CAS Registry No.: 85700-55-6
Formal Name: (1 α ,2 β ,4 β ,5 α ,7 β)-9-methyl-3-oxa-9-azatricyclo[3.3.1.0^{2,4}]nonan-7-ol, monohydrochloride
MF: C₈H₁₃NO₂ • HCl
FW: 191.7
Purity: ≥95%
UV/Vis.: λ_{max} : 203 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

Scopine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the scopine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Scopine (hydrochloride) is soluble in organic solvents such as ethanol and DMSO. The solubility of scopine (hydrochloride) in these solvents is approximately 1 and 5 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 scopine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of scopine (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

Scopine is an active metabolite of the muscarinic acetylcholine receptor (mAChR) antagonist scopolamine (Item No. 40307).¹ Scopine binds to muscarinic acetylcholine receptors with an IC₅₀ value of 3 μ M and is selective for muscarinic acetylcholine receptors over nicotinic acetylcholine receptors (IC₅₀ = >500 μ M).² It reduces hyperphagia induced by the antipsychotics loxapine (Item No. 20760) and chlorpromazine (Item No. 16129) in *C. elegans* without affecting basal feeding.³ When conjugated to chlorambucil, scopine improves the blood-brain barrier permeability of chlorambucil (Item No. 23744).⁴

References

1. Chen, H., Chen, Y., Du, P., *et al.* Liquid chromatography-electrospray ionization ion trap mass spectrometry for analysis of in vivo and in vitro metabolites of scopolamine in rats. *J. Chromatogr. Sci.* **46(1)**, 74-80 (2008).
2. Schmeller, T., Sporer, F., Sauerwein, M., *et al.* Binding of tropane alkaloids to nicotinic and muscarinic acetylcholine receptors. *Pharmazie* **50(7)**, 493-495 (1995).
3. Perez-Gomez, A., Carretero, M., Weber, N., *et al.* A phenotypic *Caenorhabditis elegans* screen identifies a selective suppressor of antipsychotic-induced hyperphagia. *Nat. Commun.* **9(1)**, 5272 (2018).
4. Wang, X., Li, J., Xu, C., *et al.* Scopine as a novel brain-targeting moiety enhances the brain uptake of chlorambucil. *Bioconjug. Chem.* **25(11)**, 2046-2054 (2014).

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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