

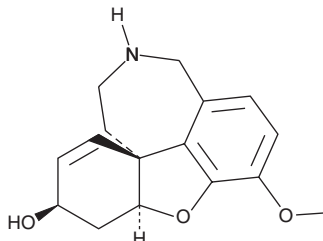
PRODUCT INFORMATION



N-desmethyl Galantamine

Item No. 35074

CAS Registry No.: 41303-74-6
Formal Name: (4aS,6R,8aS)-4a,5,9,10,11,12-hexahydro-3-methoxy-6H-benzofuro[3a,3,2-ef][2]benzazepin-6-ol
Synonyms: N-Demethylgalanthamine, Norgalantamine, Norgalanthamine
MF: C₁₆H₁₉NO₃
FW: 273.3
Purity: ≥90%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years
Item Origin: Synthetic



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

Laboratory Procedures

N-desmethyl Galantamine is supplied as a solid. A stock solution may be made by dissolving the N-desmethyl galantamine in the solvent of choice, which should be purged with an inert gas. N-desmethyl Galantamine is soluble (≥10 mg/ml) in DMSO. N-desmethyl Galantamine is slightly soluble (0.1-1 mg/ml) in acetonitrile.

Description

N-desmethyl Galantamine is an alkaloid that has been found in *C. asiaticum* and is an active metabolite of galantamine (Item No. 17559).¹⁻⁵ It inhibits acetylcholinesterase (AChE; IC₅₀ = 0.23 μM) and currents induced by ACh (Item No. 23829) by 64.8% in *Xenopus* oocytes expressing human α7 nicotinic acetylcholine receptors (nAChRs) when used at a concentration of 100 μM.² N-desmethyl Galantamine is cytotoxic to MOLT-4 acute lymphoblastic leukemia cells and LMTK alveolar fibroblasts (IC₅₀s = 0.6 and 0.5 μg/ml, respectively).⁴ It decreases disease severity in a mouse model of acute liver injury induced by carbon tetrachloride when administered at doses of 1 and 10 mg/kg.⁵

References

1. Kobayashi, S., Ishikawa, H., Kihara, M., *et al.* Isolation of N-demethylgalanthamine from the bulbs of *Crinum asiaticum* L. var. *japanicum* Baker (Amaryllidaceae). *Chem. Pharm. Bull.* **24(10)**, 2553-2555 (1976).
2. Kowal, N.M., Indurthi, D.C., Ahring, P.K., *et al.* Novel approach for the search for chemical scaffolds with activity at both acetylcholinesterase and the α7 nicotinic acetylcholine receptor: A perspective on scaffolds with dual activity for the treatment of neurodegenerative disorders. *Molecules* **24(3)**, 446 (2019).
3. Maláková, J., Nobilis, M., Svoboda, Z., *et al.* High-performance liquid chromatographic method with UV photodiode-array, fluorescence and mass spectrometric detection for simultaneous determination of galantamine and its phase I metabolites in biological samples. *J. Chromatogr. B. Analyt. Technol. Biomed. Life Sci.* **853(1-2)**, 265-274 (2007).
4. Weniger, B., Italiano, L., Beck, J.-P., *et al.* Cytotoxic activity of amaryllidaceae alkaloids. *Planta Med.* **61(1)**, 77-79 (1995).
5. Yang, N., Ko, M., Ahn, M., *et al.* Hepatoprotective effects of norgalanthamine on carbon tetrachloride

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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