Product Data Sheet

Product Name: N-Desmethyl Galanthamine
Cat. No.: GC61116

Chemical Properties

Cas. No.	41303-74-6		
SMILES	O[C@H]1C=C[C@@]23CCNCC4=CC=C(OC)C(O[C@@]3([H])C1)=C24		
Formula	$C_{16}H_{19}NO_3$	M.Wt	273.33
Solubility		Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 ℃ and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20℃ for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		
Structure	N-Desmethyl Galanthamine		

Background

N-desmethyl Galantamine is an alkaloid that has been found in *C. asiaticum* and is an active metabolite of galantamine .[1,2,3,4,5] It inhibits acetylcholinesterase (AChE; IC_{50} = 0.23 ?M) and currents induced by ACh by 64.8% in *Xenopus* oocytes expressing human α7 nicotinic acetylcholine receptors (nAChRs) when used at a concentration of 100 ?M.[2] N-desmethyl Galantamine is cytotoxic to MOLT-4 acute lymphoblastic leukemia cells and LMTK alveolar fibroblasts (IC_{50}s = 0.6 and 0.5 ?g/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]

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 disordersMolecules24(3)446(2019) 3.Maláková,

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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 samplesJ. 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 alkaloidsPlanta Med.61(1)77-79(1995) 5.Yang, N., Ko, M., Ahn, M., et al.Hepatoprotective effects of norgalanthamine on carbon tetrachloride induced-hepatotoxicity in miceDrug Chem. Toxicol.(2021)

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