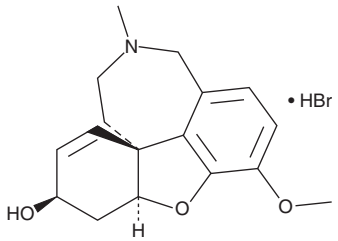
PRODUCT INFORMATION

Galantamine (hydrobromide)

Item No. 35247

CAS Registry No.: 1953-04-4
Formal Name: (4aS,6R,8aS)-4a,5,9,10,11,12-hexahydro-3-methoxy-11-methyl-6H-benzofuro[3a,3,2-ef][2]benzazepin-6-ol, monohydrobromide
Synonyms: Galanthamine, NSC 100058
MF: $C_{17}H_{21}NO_3$ • HBr
FW: 368.3
Purity: ≥98%
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

Galantamine (hydrobromide) is supplied as a solid. Aqueous solutions of galantamine (hydrobromide) can be prepared by directly dissolving the solid in aqueous buffers. The solubility of galantamine (hydrobromide) in PBS (pH 7.2) is approximately 2 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Galantamine is an alkaloid that has been found in *Galanthus* and has acetylcholinesterase (AChE) inhibitory and nicotinic acetylcholine receptor (nAChR) potentiating activities.[1-3] It selectively inhibits AChE over butyrylcholinesterase (BChE; IC_{50}s = 636 and 8,404 nM, respectively).[2] Galantamine (0.5 µM) potentiates ACh-induced currents in HEK293 cells expressing human α4β2 subunit-containing nAChRs. *In vivo*, galantamine (1.3 mg/kg per day) decreases escape latency and path length in the Morris water maze in the APP23 transgenic mouse model of Alzheimer's disease.[4] Formulations containing galantamine have been used in the treatment of Alzheimer's disease.

References

1. Harvey, A.L. The pharmacology of galanthamine and its analogues. *Pharmacol. Ther.* **68(1)**, 113-128 (1995).
2. Rook, Y., Schmidtke, K.U., Gaube, F., *et al.* Bivalent β-carbolines as potential multitarget anti-Alzheimer agents. *J. Med. Chem.* **53(9)**, 3611-3617 (2010).
3. Samochocki, M., Zerlin, M., Jostock, R., *et al.* Galantamine is an allosterically potentiating ligand of the human α4/β2 nAChR. *Acta Neurol. Scand. Suppl.* **176**, 68-73 (2000).
4. Van Dam, D. and De Deyn, P.P. Cognitive evaluation of disease-modifying efficacy of galantamine and memantine in the APP23 model. *Eur. Neuropsychopharmacol.* **16(1)**, 59-69 (2006).

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