

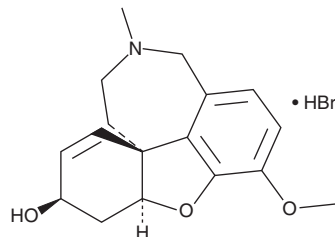
# PRODUCT INFORMATION



## Galantamine (hydrobromide)

Item No. 35247

**CAS Registry No.:** 1953-04-4  
**Formal Name:** (4a*S*,6*R*,8*aS*)-4*a*,5,9,10,11,12-hexahydro-3-methoxy-11-methyl-6*H*-benzofuro[3*a*,3,2-*ef*][2]benzazepin-6-ol, monohydrobromide  
**Synonyms:** Galanthamine, NSC 100058  
**MF:** C<sub>17</sub>H<sub>21</sub>NO<sub>3</sub> • 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.<sup>1-3</sup> It selectively inhibits AChE over butyrylcholinesterase (BChE; IC<sub>50</sub>s = 636 and 8,404 nM, respectively).<sup>2</sup> 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.<sup>4</sup> 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).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/12/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

**PHONE:** [800] 364-9897  
[734] 971-3335

**FAX:** [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM