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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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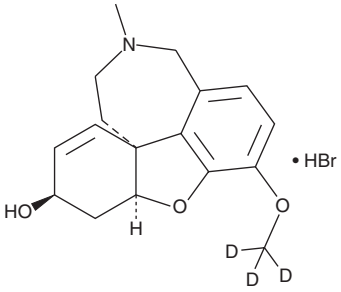
PRODUCT INFORMATION

Galantamine-d_3 (hydrobromide)

Item No. 26103

CAS Registry No.: 2140262-53-7
Formal Name: (4aS,6R,8aS)-3-(methoxy-d_3)-11-methyl-4a,5,9,10,11,12-hexahydro-6H-benzo[2,3]benzofuro[4,3-cd]azepin-6-ol, monohydrobromide
MF: $C_{17}H_{18}D_3NO_3 \bullet HBr$
FW: 371.3
Chemical Purity: ≥95% (Galantamine)
Deuterium Incorporation: ≥99% deuterated forms (d_1-d_3); ≤1% d_0
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years



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

Laboratory Procedures

Galantamine-d_3 (hydrobromide) is intended for use as an internal standard for the quantification of galantamine by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated *versus* unlabeled).

Galantamine-d_3 (hydrobromide) is supplied as a solid. A stock solution may be made by dissolving the galantamine-d_3 (hydrobromide) in the solvent of choice. Galantamine-d_3 (hydrobromide) is soluble in the organic solvent chloroform, which should be purged with an inert gas.

Description

Galantamine is an alkaloid originally isolated from the bulbs and flowers of *Galanthus* that inhibits acetylcholinesterase (AChE; IC_{50} = 636 nM).[1] It reverses growth inhibition and inhibits apoptosis, autophagic flux, and production of reactive oxygen species (ROS) induced by amyloid-β (Aβ) in neuronally differentiated PC12 cells.[2] Galantamine prevents soman toxicity and inhibits acetylcholinesterase in cynomolgus macaques (ED_{50}s = 590 and 362 µg/kg, respectively).[3] It also decreases escape latency in the Morris water maze and the total hippocampal area of Aβ plaques in an APP/PS1 transgenic mouse model of Alzheimer's disease.[4]

References

1. 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).
2. Jiang, S., Zhao, Y., Zhang, T., *et al.* Galantamine inhibits β-amyloid-induced cytostatic autophagy in PC12 cells through decreasing ROS production. *Cell Prolif.* **51(3)**, e12427 (2018).
3. Hamilton, L.R., Schachter, S.C., and Myers, T.M. Time course, behavioral safety, and protective efficacy of centrally active reversible acetylcholinesterase inhibitors in cynomolgus macaques. *Neurochem. Res.* **42(7)**, 1962-1971 (2017).
4. Wu, Z., Zhao, L., Chen, X., *et al.* Galantamine attenuates amyloid-β deposition and astrocyte activation in APP/PS1 transgenic mice. *Exp. Gerontol.* **72**, 244-250 (2015).

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