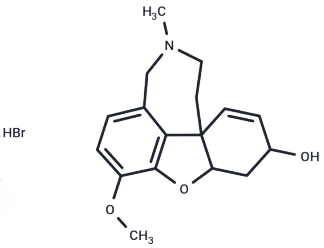
# Data Sheet (Cat.No.T0086)

TargetMol

## Galanthamine hydrobromide

### Chemical Properties



CAS No. : 1953-04-4

Formula: C17H21NO3·HBr

Molecular Weight: 368.27

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

### Biological Description

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|---|---|
| Description | Galanthamine hydrobromide (Galantamine hydrobromide), a long-acting and centrally active AChE inhibitor (IC50:410 nM), is an allosteric potentiator at neuronal nicotinic ACh receptors. |
| Targets(IC50) | AChR,Cholinesterase (ChE) |
| In vitro | Galanthamine has been demonstrated to have an IC50 of 14 nM and 15 nM on AChE in post-mortem human brain frontal cortex and the hippocampus region. Red-cell cholinesterase activity in blood samples from the neurosurgery patients is 10 times more strongly inhibited by Galanthamine in brain tissue samples. [1] Galanthamine (1 μM) activates single channels with conductance's of 18 and 30 pS in outside-out patches excised from dexamethasone mouse fibroblasts (M10 cells). [2] Galanthamine acts as noncompetitive nicotinic receptor agonists' on clonal rat pheochromocytoma (PC12) cells. Galanthamine (50 μM) activates single-channel currents in outside-out patches excised from clonal PC12 cells. [3] |
| In vivo | Galantamine significantly increases the number of living pyramidal neurons after ischemia-reperfusion injury. Galantamine significantly reduces TUNEL, active caspase-3, and SOD-2 immunoreactivity. The nicotinic antagonist mecamylamine blockes the protective effects of galantamine. The neuroprotective effects of galantamine are preserved even when first administered at 3 hours postischemia. [4] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 60 mg/mL (162.92 mM),Heating is recommended.<br>H2O: 7.4 mg/mL (20.09 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.7154 mL | 13.577 mL | 27.154 mL |
| 5 mM | 0.5431 mL | 2.7154 mL | 5.4308 mL |
| 10 mM | 0.2715 mL | 1.3577 mL | 2.7154 mL |
| 50 mM | 0.0543 mL | 0.2715 mL | 0.5431 mL |

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Reference

Thomsen T, et al. Eur J Clin Chem Clin Biochem, 1991, 29(8), 487-492.
A developmental gradient reveals biosynthetic pathways to eukaryotic toxins in monocot geophytes
Pereira EF, et al. J Pharmacol Exp Ther, 1994, 270(2), 768-778.
Storch A, et al. Eur J Pharmacol, 1995, 290(3), 207-219.
Lorrio S, et al. J Pharmacol Exp Ther, 2007, 322(2), 591-599.