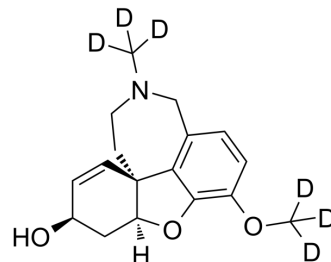


Galanthamine-d₆

Cat. No.:	HY-76299S		
CAS No.:	1128109-00-1		
Molecular Formula:	C ₁₇ H ₁₅ D ₆ NO ₃		
Molecular Weight:	293.39		
Target:	Cholinesterase (ChE); Apoptosis		
Pathway:	Neuronal Signaling; Apoptosis		
Storage:	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (340.84 mM; ultrasonic and warming and heat to 60°C)

Solvent	Mass	Concentration		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	3.4084 mL	17.0422 mL	34.0843 mL
	5 mM	0.6817 mL	3.4084 mL	6.8169 mL
	10 mM	0.3408 mL	1.7042 mL	3.4084 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Galanthamine-d₆ (Galantamine-d6) is the deuterium labeled Galanthamine. Galanthamine is a potent acetylcholinesterase (AChE) inhibitor with an IC₅₀ of 500 nM^{[1][2]}.

In Vitro

Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. *Ann Pharmacother*. 2019;53(2):211-216.

[2]. Melanie-Jayne R. Howes, et al. Acetylcholinesterase inhibitors of natural origin. *International Journal of Research in Pharmaceutical and Biomedical Sciences* 3(SI 1):67-86.

[3]. Kuryatov A, et al. Roles of accessory subunits in alpha4beta2(*) nicotinic receptors. Mol Pharmacol. 2008 Jul;74(1):132-43.

[4]. Kita Y, et al. Galantamine increases hippocampal insulin-like growth factor 2 expression via $\alpha 7$ nicotinic acetylcholine receptors in mice. Psychopharmacology (Berl). 2013 Feb;225(3):543-51.

Caution: Product has not been fully validated for medical applications. For research use only.

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