Donepezil-d_7 hydrochloride

Cat. No.: HY-14566S

CAS No.: 1261394-20-0

Molecular Formula: $C_{24}H_{23}D_7ClNO_3$

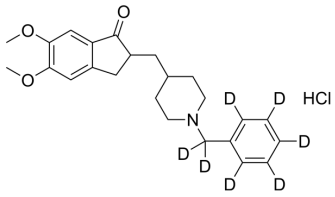
Molecular Weight: 423

Target: Cholinesterase (ChE); Isotope-Labeled Compounds

Pathway: Neuronal Signaling; Others

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



BIOLOGICAL ACTIVITY

Description	Donepezil-d_7 (hydrochloride) is the deuterium labeled Donepezil. Donepezil (E2020 free base) is a specific and potent AChE inhibitor with IC50s of 8.12 nM and 11.6 nM for bovine AChE and human AChE, respectively[1].
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]. Ogura, H., et al., Comparison of inhibitory activities of donepezil and other cholinesterase inhibitors on acetylcholinesterase and butyrylcholinesterase in vitro. Methods Find Exp Clin Pharmacol, 2000. 22(8): p. 609-13.;Snape, M.F., et al., A comparative study in rats of the in vitro and in vivo pharmacology of the acetylcholinesterase inhibitors tacrine, donepezil and NXX-066. Neuropharmacology, 1999. 38(1): p. 181-93.;Huang, Z.H., et al., Donepezil protects endothelial cells against hydrogen peroxide-induced cell injury. CNS Neurosci Ther, 2012. 18(2): p. 185-7.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA