BuChE-IN-7

Cat. No.: HY-152632

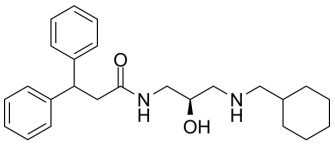
Molecular Formula: $C_{25}H_{34}N_2O_2$

Molecular Weight: 394.55

Target: Cholinesterase (ChE)

Pathway: Neuronal Signaling

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	BuChE-IN-7 is a highly selective inhibitor of hBuChe and eqBuChE with IC_{50} values of 40 nM, 80 nM respectively. BuChE-IN-7 can promote cognitive with blood-brain penetration and improves situational and phobic memory, showing preference for new things[1].	
IC_{50} & Target	hBCHE 40 nM (IC_{50})	eqBCHE 80 nM (IC_{50})
In Vitro	BuChE-IN-7 (compound (R)-29) (10 μM; 5 min) inhibits eqBuChE, hBuChE with IC_{50} values of 0.08 μM, 0.04 μM respectively[1]. BuChE-IN-7 (1, 10, 50 and 100 μM; 72 h) has hepatotoxicity in HepG2 cell line with an IC_{50} value of 2.85 μM. BuChE-IN-7 decreas the cell activity and shows weaker effect on CYP3A4[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	
In Vivo	BuChE-IN-7 (compound (R)-29) (10 mg/kg and 30 mg/kg; i.p.; single dose) has no effect on memory improvement function of amnesia mouse model caused by Scopolamine (HY-N0296), and also has blood-brain penetration[1]. BuChE-IN-7 (10 mg/kg; i.p.; once daily for 6 days) has insignificant improvement the learning defect caused by scopolamine in mice[1]. BuChE-IN-7 (15 mg/kg and 30 mg/kg; i.p.; single dose) significantly promotes cognition and improves situational and phobic memory of mice, showing preference for new things[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.	

REFERENCES

[1]. Panek D, et al. Discovery of new, highly potent and selective inhibitors of BuChE - design, synthesis, in vitro and in vivo evaluation and crystallography studies. Eur J Med Chem. 2023 Jan 18;249:115135.

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