AChE-IN-15

Cat. No.: HY-146039

CAS No.: 2242792-25-0

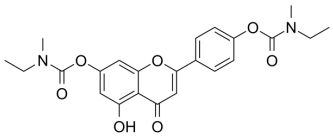
Molecular Formula: $C_{23}H_{24}N_2O_7$

Molecular Weight: 440.45

Target: Cholinesterase (ChE)

Pathway: Neuronal Signaling

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



BIOLOGICAL ACTIVITY

Description

AChE-IN-15 (Compound 3d) is a reversible human acetylcholinesterase (huAChE) (IC_{50}=6.8 μM) and human butyrylcholinesterase (huBChE) (IC_{50}=16.1 μM) inhibitor. AChE-IN-15 shows significant antioxidant potency, AChE-IN-15 can be used for the research of Alzheimer's disease[1].

In Vitro

AChE-IN-15 (compound 3d) inhibits huAChE and huBChE with IC_{50} values of 6.8 and 16.1 μM and inhibits RatAChE and RatBChE with IC_{50} values of 4.7 and 12.1μM[1].

AChE-IN-15 (compound 3d) (25 μM) inhibits self-mediated aggregation (77.9), huAChE-induced $A\beta_{1-42}$ aggregation (73.6%), inhibit (78.9%) and disaggregate (64.6%) Cu^{2+}-mediated Cu^{2+}-mediated aggregation[1].

AChE-IN-15 (compound 3d) (25 μM) is an neuroprotective agent and displays hepatoprotective activity[1].

AChE-IN-15 (compound 3d) (25 μM) shows good blood-brain barrier (BBB) penetration[1].

AChE-IN-15 (compound 3d) (5-10 μM) displays neuroprotective effect on $A\beta_{1-42}$-induced SH-SY5Y neurotoxicity[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	PC12 cells
Concentration:	5 and 10 μM
Incubation Time:	24 hours
Result:	Increased the cell viability to 63.9% (5 μM) and 72.3% (10 μM), respectively.

In Vivo

AChE-IN-15 (compound 3d) (5-20 mg/kg; 14 days; Kunming mice) can reverse cognitive deficit.

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

Animal Model:	Kunming mice[1]
Dosage:	5, 10 and 20 mg/kg
Administration:	for 14 days
Result:	Reversed cognitive deficit induced by scopolamine.

REFERENCES

[1]. Zhipei Sang, et al. Apigenin-rivastigmine hybrids as multi-target-directed liagnds for the treatment of Alzheimer's disease. Eur J Med Chem. 2020 Feb 1;187:111958.

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