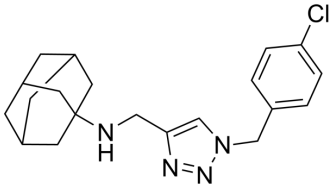
AChE/Aβ-IN-2

Cat. No.:	HY-155735
Molecular Formula:	$C_{20}H_{25}ClN_4$
Molecular Weight:	356.89
Target:	iGluR; Cholinesterase (ChE); Amyloid-β
Pathway:	Membrane Transporter/Ion Channel; Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	AChE/Aβ-IN-2 (compound 33) is a potent and orally active inhibitor of acetylcholinesterase (AChE) with IC_{50} of 135 nM, as well as an antagonist of NMDA receptor (GluN1-1b/GluN2B subunit combination) with IC_{50} of 5.054 μM. AChE/Aβ-IN-2 also inhibits Aβ aggregation and shows good blood-brain barrier permeability. AChE/Aβ-IN-2 improves cognitive and spatial memory impairment in rats model[1].
IC_{50} & Target	IC50: 135 nM (AChE), 5.054 μM (NMDA receptor, GluN1-1b/GluN2B subunit)[1]
In Vitro	AChE/Aβ-IN-2 (compound 33) (5-20 μM; 48 h) inhibits Aβ1-42 (10 μM) aggregation[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	AChE/Aβ-IN-2 (compound 33) (10 mg/kg/d; po; 7 days) inhibits Aβ1-42-induced memory deficits in rat models, and decreases the time spent in the platform zone in the Morris water maze[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Gutti G, et al. Discovery of triazole-bridged aryl adamantane analogs as an intriguing class of multifunctional agents for treatment of Alzheimer's disease. Eur J Med Chem. 2023 Nov 5;259:115670.

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