# AChE/Aβ-IN-1

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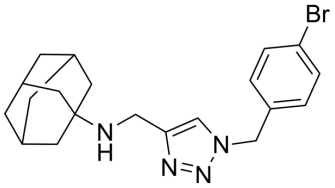
| **Cat. No.:** | HY-155733 |
| **Molecular Formula:** | $C_{20}H_{25}BrN_4$ |
| **Molecular Weight:** | 401.34 |
| **Target:** | iGluR; Cholinesterase (ChE); Amyloid-β |
| **Pathway:** | Membrane Transporter/Ion Channel; Neuronal Signaling |
| **Storage:** | Please store the product under the recommended conditions in the Certificate of Analysis. |




## BIOLOGICAL ACTIVITY

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| **Description** | AChE/Aβ-IN-1 (compound 32) is a potent and orally active inhibitor of acetylcholinesterase (AChE) with an $IC_{50}$ of 86 nM, as well as an antagonist of NMDA receptor (GluN1-1b/GluN2B subunit combination) with $IC_{50}$ of 3.876 μM. AChE/Aβ-IN-1 also inhibits Aβ aggregation and shows good blood-brain barrier permeability and neuroprotection. AChE/Aβ-IN-1 improves cognitive and spatial memory impairment in rats model[1]. |
| **$IC_{50}$ & Target** | IC50: 86 nM (AChE), 3.876 μM (NMDA receptor, GluN1-1b/GluN2B subunit)[1] |
| **In Vitro** | AChE/Aβ-IN-1 (compound 32) (5-20 μM; 48 h) inhibits Aβ1-42 (10 μM) aggregation[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |
| **In Vivo** | AChE/Aβ-IN-1 (compound 32) (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].<br>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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