AChE/MAO-IN-1

Cat. No.: HY-152109

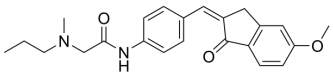
Molecular Formula: $C_{23}H_{26}N_2O_3$

Molecular Weight: 378.46

Target: Cholinesterase (ChE); Monoamine Oxidase; Amyloid-β

Pathway: Neuronal Signaling

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



BIOLOGICAL ACTIVITY

Description

AChE/MAO-IN-1 (Compound D28) is a potent AChE, MAO-A and MAO-B inhibitor with IC_{50}s of 0.0248, 0.0409 and 0.1108 μM against human AChE, MAO-B and MAO-A, respectively[1].

IC_{50} & Target

hAChE	hMAO-B	hMAO-A	hMAO-A
0.0248 μM (IC_{50})	0.0409 μM (IC_{50})	0.1069 μM (Ki)	0.1108 μM (IC_{50})

Aβ42
0.1467 μM (IC_{50})

In Vitro

AChE/MAO-IN-1 (Compound D28) shows antioxidant activity with an IC_{50} of 0.210 ± 0.010 μM in the DPPH free-radical scavenging activity test[1].

AChE/MAO-IN-1 inhibits beta amyloid 1–42 (Aβ42) with an IC_{50} of 0.1467 ± 0.0053 μM[1].

AChE/MAO-IN-1 (24 h) shows low cytotoxicity against NIH/3T3 cells (IC_{50}: 6.5162 ± 0.1750 μM)[1].

AChE/MAO-IN-1 can very effectively bind to the active site of the MAO-A enzyme[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	NIH/3T3 mouse fibroblast healthy cell line
Concentration:	
Incubation Time:	24 h
Result:	Showed cytotoxicity with an IC_{50} of 6.5162 ± 0.1750 μM.

REFERENCES

[1]. Sağlık BN, et al. Design, Synthesis, and In Vitro and In Silico Approaches of Novel Indanone Derivatives as Multifunctional Anti-Alzheimer Agents. ACS Omega. 2022 Dec 7;7(50):47378-47404.

Caution: Product has not been fully validated for medical applications. For research use only.

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