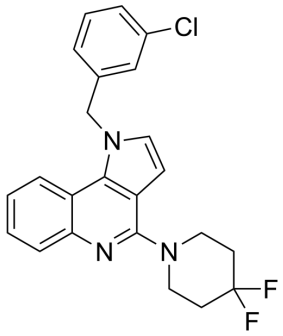
MAO-B-IN-4

Cat. No.:	HY-143330
Molecular Formula:	$C_{23}H_{20}ClF_2N_3$
Molecular Weight:	411.87
Target:	Monoamine Oxidase
Pathway:	Neuronal Signaling
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

MAO-B-IN-4 (Compound 26) is an orally active and reversible MAO-B inhibitor with an IC_{50} of 9 nM. MAO-B-IN-4 has good metabolic stability, safety profile and brain permeability. MAO-B-IN-4 shows antidepressant activity in rats and mice. MAO-B-IN-4 can be used in studies related to Alzheimer's disease[1].

In Vitro

MAO-B-IN-4 (0.25 μM 24 h exposure to 0.5 μM DOX) displays a significant glioprotective effect in a model of cultured astrocytes [1].

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

Cell Viability Assay[1]

Cell Line:	HepG2 cells
Concentration:	0.1-100 μM
Incubation Time:	72 h
Result:	Showed no effect on the viability of the cells after 24 hours of exposure.

In Vivo

MAO-B-IN-4 (1 and 3 mg/kg, p.o., 2 h) can prevent scopolamine-induced short-term memory impairment[1].

MAO-B-IN-4 (0.312-2.5 mg/kg, i.p., 1 h) exhibits antidepressant-like properties in mice in the forced swim test[1].

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

Animal Model:	Rats treated with anticholinergic scopolamine[1]
Dosage:	1 and 3 mg/kg
Administration:	Oral administration; 2h before the experiment
Result:	Orally 2 h before the acquisition trial prevented scopolamine-induced short-term memory deficits

Animal Model:	Mice models[1]p>
Dosage:	0.312-2.5 mg/kg

Administration:	Intraperitoneal injection; 1h
Result:	Resulted a similar effect with antidepressant S-citalopram (HY-14258) under the dose of 0.625 mg/kg and 1.25 mg/kg, respecively.

REFERENCES

[1]. Grychowska K, et al. Overcoming undesirable hERG affinity by incorporating fluorine atoms: A case of MAO-B inhibitors derived from 1 H-pyrrolo-[3,2-c]quinolines. Eur J Med Chem. 2022 Jun 5;236:114329.

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