MAO-B-IN-18

Cat. No.: HY-149234

Molecular Formula: $C_{25}H_{22}N_4O_5$

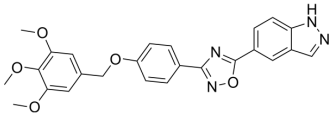
Molecular Weight: 458.47

Target: Monoamine Oxidase

Pathway: Neuronal Signaling

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (218.12 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	2.1812 mL	10.9058 mL	21.8117 mL
5 mM	0.4362 mL	2.1812 mL	4.3623 mL
10 mM	0.2181 mL	1.0906 mL	2.1812 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: 2.5 mg/mL (5.45 mM); Clear solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description

MAO-B-IN-18 is a potent and selective MAO B inhibitor with IC_{50}s of 52 nM and 14 μM for hMAO B and hMAO A, respectively. MAO-B-IN-18 enables promising cytoprotective effects against hydrogen peroxide insults in neuroblastoma and astrocytes cultures[1].

IC_{50} & Target

hMAO-B	hMAO-A
52 nM (IC_{50})	14 μM (IC_{50})

In Vitro

MAO-B-IN-18 (compound 20; 0.1, 0.5, 1, 5 μM) at low concentration proves to be able to protect neuroblastoma cells from pro-oxidant insults through ROS-scavenging pathways at a moderate level in SH-SY5Y cells[1].

MAO-B-IN-18 (5 μM) co-incubated at with hydrogen peroxide (400 μM) maintains viable cells at a level comparable to that of Quercetin (HY-18085) used as positive control at higher doses (75 μM) in DI TNC1 astrocyte cell line[1].

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

REFERENCES

[1]. Mariagrazia Rullo, et al. Bioisosteric replacement based on 1,2,4-oxadiazoles in the discovery of 1H-indazole-bearing neuroprotective MAO B inhibitors. Eur J Med Chem. 2023 Jul 5;255:115352.

[2]. Mariagrazia Rullo, et al. Bioisosteric replacement based on 1,2,4-oxadiazoles in the discovery of 1H-indazole-bearing neuroprotective MAO B inhibitors. Eur J Med Chem. 2023 Jul 5;255:115352.

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

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