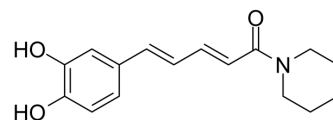


hMAO-B/MB-COMT-IN-1

Cat. No.:	HY-151388		
CAS No.:	254974-70-4		
Molecular Formula:	C ₁₆ H ₁₉ NO ₃		
Molecular Weight:	273.33		
Target:	Monoamine Oxidase; COMT		
Pathway:	Neuronal Signaling; Metabolic Enzyme/Protease		
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 (365.86 mM; Need ultrasonic)					
		Solvent Concentration	Mass	1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM		3.6586 mL	18.2929 mL	36.5858 mL
		5 mM		0.7317 mL	3.6586 mL	7.3172 mL
10 mM			0.3659 mL	1.8293 mL	3.6586 mL	
Please refer to the solubility information to select the appropriate solvent.						
In Vivo	<ol style="list-style-type: none"> Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (9.15 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (9.15 mM); Clear solution; Need ultrasonic Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: 2.5 mg/mL (9.15 mM); Clear solution; Need ultrasonic 					

BIOLOGICAL ACTIVITY

Description	hMAO-B/MB-COMT-IN-1 is a dual MAO-B/MB-COMT inhibitor (IC ₅₀ : 2.5 μM for hMAO-B, 3.84 μM for MB-COMT). hMAO-B/MB-COMT-IN-1 protects cells against oxidative damage. hMAO-B/MB-COMT-IN-1 can be used in the research of neurodegeneration disease, such as Parkinson's Disease (PD) ^[1] .
IC₅₀ & Target	hMAO-B, MB-COMT ^[1]
In Vitro	hMAO-B/MB-COMT-IN-1 (compound 3, 50 μM, 24 h) decreases in resazurin reduction in differentiated SH-SY5Y cells ^[1] .

hMAO-B/MB-COMT-IN-1 (50 μ M, 24 h) displays lysosomal toxicity by producing ROS in differentiated SH-SY5Y cells^[1].
hMAO-B/MB-COMT-IN-1 (10 μ M, 30 min) displays remarkable cytoprotective effects against t-BHP in differentiated SH-SY5Y cells^[1].
hMAO-B/MB-COMT-IN-1 is predicted to cross the blood-brain barrier (BBB) by passive diffusion, determined by the parallel artificial membrane permeability assay (PAMPA)-BBB kit^[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Daniel Chavarria, et al. Boosting caffeic acid performance as antioxidant and monoamine oxidase B/catechol-O-methyltransferase inhibitor. Eur J Med Chem. 2022 Sep 8;243:114740.

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

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