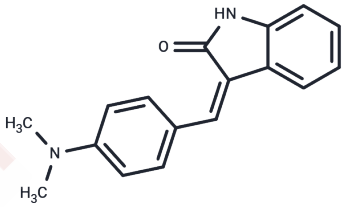
Data Sheet (Cat.No.T5676)

TargetMol

(Z)-SU4312

Chemical Properties



CAS No. :	90828-16-3
Formula:	C17H16N2O
Molecular Weight:	264.32
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	(Z)-SU4312 is a inhibitor of MAO-B and NOS(IC50 value of 0.2 μM, 19.0μM,respectively).
Targets(IC50)	MAO,NOS,PDGFR,VEGFR
In vitro	(Z)-SU4312 unexpectedly prevented MPP(+) -induced neuronal apoptosis in vitro and decreased MPTP-induced loss of dopaminergic neurons, reduced expression of mRNA for tyrosine hydroxylase and impaired swimming behaviour in zebrafish.?(Z)-SU4312 exhibited non-competitive inhibition of purified neuronal NOS (nNOS) with an IC(50) value of 19.0?μM but showed little or no effects on inducible and endothelial NOS. Molecular docking simulations suggested an interaction between (Z)-SU4312 and the haem group within the active centre of nNOS[1].
In vivo	(Z)-SU4312 was able to selectively inhibit monoamine oxidase-B (MAO-B) activity both in vitro and in vivo, with an IC50 value of 0.2 μM.(Z)-SU43122 provides therapeutic benefits in cellular and animal models of PD, possibly through multiple mechanisms including enhancement of MEF2D through the activation of PI3-K/Akt pathway, maintenance of mitochondrial biogenesis and inhibition of MAO-B activity.?(Z)-SU4312 thus may be an effective drug candidate for the prevention or even modification of the pathological processes of PD[2].
Animal Research	MPP(+) -treated neurons and 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine (MPTP)-treated zebrafish were used to study neuroprotection by?(Z)-SU4312. NOS activity was assayed in vitro to examine direct interactions between?SU4312?and NOS isoforms[1].

Solubility Information

Solubility	DMSO: 30 mg/mL (113.5 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.7833 mL	18.9165 mL	37.8329 mL
5 mM	0.7567 mL	3.7833 mL	7.5666 mL
10 mM	0.3783 mL	1.8916 mL	3.7833 mL
50 mM	0.0757 mL	0.3783 mL	0.7567 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Cui W, Zhang Z, Li W , et al. The anti-cancer agent SU4312 unexpectedly protects against MPP(+) -induced neurotoxicity via selective and direct inhibition of neuronal NOS[J].Br J Pharmacol. 2013 Mar;168(5):1201-14.
Li X W, Yuan S C, Wang M, et al.Rosmarinic acid ameliorates autoimmune responses through suppression of intracellular nucleic acid-mediated type I interferon expression.Biochemical and Biophysical Research Communications.2023
Guo B , Hu S , Zheng C , et al. Substantial protection against MPTP-associated Parkinson\"s neurotoxicity, in vitro, and, in vivo, by anti-cancer agent SU4312 via activation of MEF2D and inhibition of MAO-B[J]. Neuropharmacology, 2017:S0028390817303817.