MDL 72527 dihydrochloride

Cat. No.: HY-100621

CAS No.: 93565-01-6

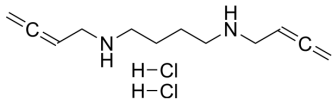
Molecular Formula: $C_{12}H_{22}Cl_2N_2$

Molecular Weight: 265.22

Target: Others

Pathway: Others

Storage: 4°C, sealed storage, away from moisture and light
* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light)



SOLVENT & SOLUBILITY

In Vitro

H_2O : 100 mg/mL (377.05 mM; Need ultrasonic)
DMSO : 12.5 mg/mL (47.13 mM; ultrasonic and warming and heat to 60°C)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.7705 mL	18.8523 mL	37.7045 mL
5 mM	0.7541 mL	3.7705 mL	7.5409 mL
10 mM	0.3770 mL	1.8852 mL	3.7705 mL

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

In Vivo

1. Add each solvent one by one: Saline
   Solubility: 50 mg/mL (188.52 mM); Clear solution; Need ultrasonic
2. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 1.25 mg/mL (4.71 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 1.25 mg/mL (4.71 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

MDL 72527 dihydrochloride is a potent polyamine oxidase (PAO) inhibitor. MDL 72527 dihydrochloride shows a lysosomotropic effect. MDL 72527 dihydrochloride shows neuroprotective effects[1][2].

IC_{50} & Target

polyamine oxidase (PAO)[1]

In Vitro

MDL 72527 dihydrochloride (300 μM; 24 h) shows evident morphological changes with the appearance of a large number of lysosomes and numerous cytoplasmic vacuoles in M14 WT cells[2].

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

Cell Cytotoxicity Assay[2]

Cell Line:	M14 cells
Concentration:	300 μM
Incubation Time:	24 h
Result:	Showed no significant effect on cell survival of melanoma cells.

In Vivo

MDL 72527 dihydrochloride (100 mg/kg; i.p.; once) shows neuroprotective against neuronal cell damage after temporary focal cerebral ischemia[1].

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

Animal Model:	250-300 g, Male spontaneously hypertensive rats (SHRs)[1]
Dosage:	100 mg/kg
Administration:	I.p.; after the induction of ischemia
Result:	Significantly reduced meanarterial blood pressure, changed the brain edema formation from 85.7 ± 0.3 to 84.5 ± 0.9% in cortex and from 79.9 ± 1.7 to 78.4 ± 2.0% in subcortex (difference not significant), reduced ischemic injury volume by 22% in the cortex and 17% in the subcortex.

REFERENCES

[1]. Doğan A, et al. Effects of MDL 72527, a specific inhibitor of polyamine oxidase, on brain edema, ischemic injury volume, and tissue polyamine levels in rats after temporary middle cerebral artery occlusion. J Neurochem. 1999 Feb;72(2):765-70.

[2]. Agostinelli E, et al. Toxicity of enzymatic oxidation products of spermine to human melanoma cells (M14): sensitization by heat and MDL 72527. Biochim Biophys Acta. 2006 Oct;1763(10):1040-50.

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