Dihydroergocristine mesylate

Cat. No.: HY-N2319

CAS No.: 24730-10-7

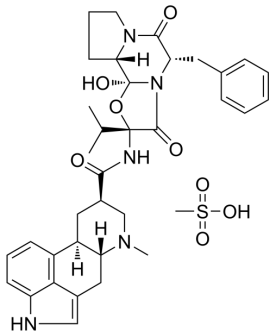
Molecular Formula: $C_{36}H_{45}N_5O_8S$

Molecular Weight: 707.84

Target: Amyloid-β

Pathway: Neuronal Signaling

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : 50 mg/mL (70.64 mM; Need ultrasonic)
H_2O : < 0.1 mg/mL (insoluble)

Preparing Stock Solutions

Concentration \ Solvent \ Mass	1 mg	5 mg	10 mg
1 mM	1.4127 mL	7.0637 mL	14.1275 mL
5 mM	0.2825 mL	1.4127 mL	2.8255 mL
10 mM	0.1413 mL	0.7064 mL	1.4127 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.5 mg/mL (3.53 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.5 mg/mL (3.53 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.5 mg/mL (3.53 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Dihydroergocristine mesylate (DHEC mesylate) is a inhibitor of γ-secretase (GSI), reduces the production of the Alzheimer's disease amyloid-β peptides, binds directly to γ-secretase and Nicastrin with equilibrium dissociation constants (K_d) of 25.7 nM and 9.8 μM, respectively[1].

In Vitro

Dihydroergocristine (DHEC) (2-20 μM; 24 hours) has an IC_{50} value of 25?μM for inhibiting the activity of γ-secretase in T100 cells without affecting cell viability[1].
Dihydroergocristine (2-20 μM; 24 hours) inhibits cellular Aβ production and causes a dose-dependent accumulation of carboxy-terminal fragments of APP (APP-CTFs) in HEK293 and decreases γ-secretase activity in fibroblast cells[1].

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

Western Blot Analysis[1]

Cell Line:	WT HEK293 cells; Fibroblast cells
Concentration:	2 μM, 5 μM, 10 μM, 20 μM
Incubation Time:	24 hours
Result:	Increased APP-CTFs accumulation in a dose-dependent manner.

REFERENCES

[1]. Lei X, et al. The FDA-approved natural product dihydroergocristine reduces the production of the Alzheimer's disease amyloid-β peptides. Sci Rep. 2015 Nov 16;5:16541.

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