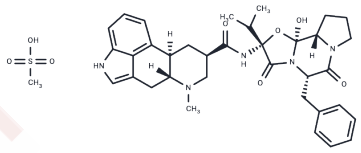
# Data Sheet (Cat.No.T11043)

TargetMol

## Dihydroergocristine mesylate

### Chemical Properties



CAS No. : 24730-10-7

Formula: C36H45N5O8S

Molecular Weight: 707.84

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

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|---|---|
| Description | Dihydroergocristine mesylate (DHEC (mesylate))(DHEC mesylate) is the methanesulfonic acid salt of dihydroergocristine. It has been used as the for the symptomatic treatment of mental deterioration associated with cerebrovascular insufficiency and in peripheral vascular disease. Dihydroergocristine 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 (Kd) of 25.7 nM and 9.8 μM, respectively[1]. It is also a component of ergoloid mesylate (codergocrine mesilate), a mixture of ergot alkaloid derivatives that is used as a vasodilator and has shown mild benefits in the treatment of vascular dementia. It has a role as a vasodilator agent, an alpha-adrenergic antagonist and a geroprotector. It contains a dihydroergocristine. |
| Targets(IC50) | Beta Amyloid |
| In vitro | The IC50 value(2-20 μM; 24 hours) of Dihydroergocristine (DHEC) for inhibiting the activity of γ-secretase in T100 cells without affecting cell viability is 25 μM. 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]. |
| Cell Research | Dihydroergocristine (2-20 μM; 24 hours) causes a dose-dependent accumulation of carboxy-terminal fragments of APP (APP-CTFs) in HEK293 and decreases γ-secretase activity in fibroblast cells and inhibits cellular Aβ production[1]. |

### Solubility Information

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|---|---|
| Solubility | DMSO: 137.5 mg/mL (194.25 mM),Sonication is recommended.<br>H2O: 1 mg/mL (1.41 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (2.83 mM),Sonication is recommended.<br>*Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 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 |
| 50 mM | 0.0283 mL | 0.1413 mL | 0.2825 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

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.