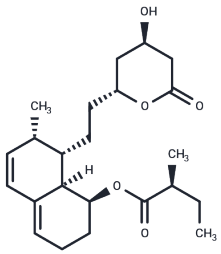
Data Sheet (Cat.No.T0683)

TargetMol

Mevastatin

Chemical Properties



CAS No. : 73573-88-3

Formula: C23H34O5

Molecular Weight: 390.51

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	Mevastatin (ML236B) is an HMG-CoA reductase inhibitor that was initially isolated from the mold Pythium ultimum. Mevastatin was the first statin to enter clinical trials.
Targets(IC50)	Apoptosis,Antibacterial,Antibiotic,HMG-CoA Reductase,Autophagy,Lipid
In vitro	Mevastatin competitively inhibits HMG-CoA reductase, subsequently reducing cholesterol synthesis in the liver. After 14 days of high-dose treatment, a more than 30% increase in baseline absolute cerebral blood flow was observed. Oral administration of Mevastatin at doses of 5 mg/kg and 20 mg/kg led to reductions in serum cholesterol levels 3 hours post-administration, with the 20 mg/kg dosage decreasing serum cholesterol by approximately 30%.
In vivo	The bicyclic portion of Mevastatin binds to the active site of coenzyme A. Mevastatin elevates eNOS mRNA and protein levels, reduces infarct size, and ameliorates neurological deficits in a dose- and time-dependent manner. At a concentration of 0.01 pg/mL (26 nM), Mevastatin can reduce cholesterol synthesis by 50% compared with the control group.

Solubility Information

Solubility	DMSO: 83.33 mg/mL (213.39 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), H2O: < 1 mg/mL (insoluble or slightly soluble), (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 8.33 mg/mL (21.33 mM),Solution. 10% DMSO+90% Saline: < 8.33 mg/mL (21.33 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. *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	2.5608 mL	12.8038 mL	25.6075 mL
5 mM	0.5122 mL	2.5608 mL	5.1215 mL
10 mM	0.2561 mL	1.2804 mL	2.5608 mL
50 mM	0.0512 mL	0.2561 mL	0.5122 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

Endo A, et al. J Antibiot (Tokyo), 1976, 29(12), 1346-1348.
Dang Y, Wang Y, Wei J, et al.25-Hydroxycholesterol inhibits Hantavirus infection by reprogramming cholesterol metabolism.Free Radical Biology and Medicine.2024
Amin-Hanjani S, et al. Stroke, 2001, 32(4), 980-986.