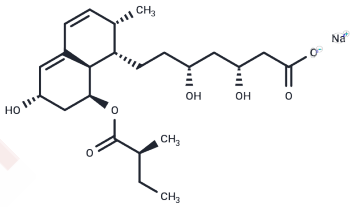
Data Sheet (Cat.No.T0672)

TargetMol

Pravastatin sodium

Chemical Properties



CAS No. : 81131-70-6

Formula: C23H35NaO7

Molecular Weight: 446.52

Storage: Keep away from direct sunlight,Keep away from moisture
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	Pravastatin sodium (CS-514 (sodium)), an HMG-CoA reductase inhibitor, inhibits sterol synthesis with IC50 of 5.6 μM.
Targets(IC50)	Ferroptosis,HMG-CoA Reductase,Autophagy
In vitro	Pravastatin (30 mg/kg/day) reduced malnutrition-induced lesions by 34%. In female Wistar rats exposed to radiation, which presented with decreased CCN2 levels, Pravastatin (30 mg/kg/day) could restore muscle structure. A single dose of 40 mg of Pravastatin lowered cholesterol synthesis by 62% in monocytes from healthy individuals and by 47% in patients with hypercholesterolemia. Moreover, treatment with Pravastatin (40 mg/day for 8 weeks) in hypercholesterolemic patients increased LDL degradation by 57% while inhibiting cholesterol synthesis by 55%.
In vivo	In murine peritoneal macrophages (MPM), the J-774 A.1 macrophage-like cell line, and human monocyte-derived macrophages (HMDM), Pravastatin exhibits a dose-dependent inhibition of cholesterol synthesis. Upon LDL addition, concentrations of Pravastatin below 0.19 μg/mL enhance the esterification of cellular cholesterol, whereas levels below 100 μg/mL suppress esterification. At less than 0.5 mM, Pravastatin attenuates the Rho/ROCK pathway activity in human ileal and colonic transplants, reducing CCN2 mRNA levels. Pravastatin at concentrations less than 1 mM also induces the inhibition of CCN2 in primary human smooth muscle cells. In all cases, Pravastatin at less than 0.5 mM reduces the mRNA levels of type I collagen and fibronectin. Pravastatin facilitates vasodilation in aortic rings, achieving 62.8% endothelium-dependent relaxation at 10 μM after 8 minutes. Pravastatin-Na at 10 μM inhibits sterol synthesis with 50% greater efficacy than in peripheral blood mononuclear cells. In bovine aortic endothelial cells, Pravastatin at less than 10 μM stimulates NOS activity and NO release within 10 minutes, with L-arginine further enhancing NO production in response to Pravastatin.

Solubility Information

Solubility	H2O: 44.7 mg/mL (100.11 mM),Sonication is recommended. DMSO: 247.5 mg/mL (554.29 mM),Sonication is recommended. (< 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 (4.48 mM),Sonication is recommended. *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	2.2395 mL	11.1977 mL	22.3954 mL
5 mM	0.4479 mL	2.2395 mL	4.4791 mL
10 mM	0.224 mL	1.1198 mL	2.2395 mL
50 mM	0.0448 mL	0.224 mL	0.4479 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

Kurakata S, et al. Immunopharmacology, 1996, 34(1), 51-61.
Huang Y, Zucker B, Zhang S, et al. Migrasome formation is mediated by assembly of micron-scale tetraspanin macrodomains. Nature cell biology. 2019, 21(8): 991.
Dang Y, Wang Y, Wei J, et al.25-Hydroxycholesterol inhibits Hantavirus infection by reprogramming cholesterol metabolism.Free Radical Biology and Medicine.2024
Kaesemeyer WH, et al. J Am Coll Cardiol, 1999, 33(1), 234-241.
Keidar S, et al. Br J Clin Pharmacol, 1994, 38(6), 513-519.
Haydont V, et al. Clin Cancer Res, 2007, 13(18 Pt 1), 5331-5340.
Dagli N, et al. Inflammation, 2007, 30(6), 230-235.
Huang Y, Zucker B, Zhang S, et al. Migrasome formation is mediated by assembly of micron-scale tetraspanin macrodomains[J]. Nature cell biology. 2019, 21(8): 991.