

Dalfopristin (mesylate) (112362-50-2 free base)

Chemical Properties

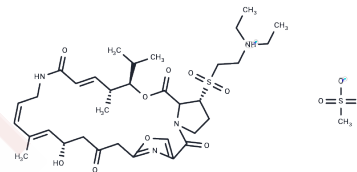
CAS No. :

Formula: C₃₄H₅₁N₄O₉S·CH₃SO₃

Molecular Weight: 787

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	Dalfopristin (mesylate) is a streptogramin antibiotic and a 50S ribosome inhibitor. Streptogramins are produced by a variety of Streptomyces sp as a mixture (ratio of 7:3) of two chemically unrelated compounds, type A and B. Dalfopristin, the type A Streptogramin is often combined with type B streptogramin antibiotic, quinupristin, to produce Quinupristin-Dalfopristin Complex, known commercially as Synercid. The ribosome is composed of two ribonucleoprotein subunits, the 50S, and 30S. The 50S ribosome inhibitors inhibited protein synthesis.
Targets(IC50)	Others
In vitro	Dalfopristin is a cyclic polyunsaturated macrolactone that interferes with the binding of tRNA substrates to both A- and P-sites [2]. Dalfopristin blocked the access of peptidyl-tRNAs to the ribosome and peptidyltransferase elongation reaction in bacteria [1]. quinupristin and dalfopristin acted synergistically to kill Gram-positive bacteria, as well as some Gram-negative and anaerobic bacteria [2][3]. Dalfopristin hydrolyzed rapidly to virginiamycin M under physiological conditions.

Solubility Information

Solubility	Ethanol: Soluble, DMSO: Soluble, (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2706 mL	6.3532 mL	12.7065 mL
5 mM	0.2541 mL	1.2706 mL	2.5413 mL
10 mM	0.1271 mL	0.6353 mL	1.2706 mL
50 mM	0.0254 mL	0.1271 mL	0.2541 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

Herbst D A, Reddy K R. NS5A inhibitor, daclatasvir, for the treatment of chronic hepatitis C virus infection[J]. Expert opinion on investigational drugs, 2013, 22(10): 1337-1346.

Gao M, Nettles R E, Belema M, et al. Chemical genetics strategy identifies an HCV NS5A inhibitor with a potent clinical effect[J]. Nature, 2010, 465(7294): 96-100.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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