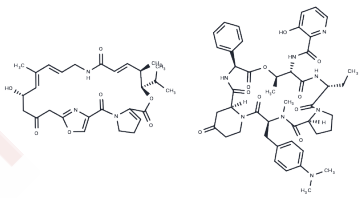
Data Sheet (Cat.No.T75278)

TargetMol

Pristinamycin

Chemical Properties



CAS No. :	270076-60-3
Formula:	C73H89N11O17
Molecular Weight:	1392.55
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	Pristinamycin, produced by Streptomyces pristinaespiralis, is an orally active streptogramin-like antibiotic consisting of two chemically unrelated components: Pristinamycin I (PI) and Pristinamycin II (PII). These components act synergistically to inhibit bacterial protein synthesis. Pristinamycin is highly active against many antibiotic-resistant pathogens, particularly Gram-positive bacteria, including Methicillin-resistant Staphylococcus aureus (MRSA), Vancomycin-resistant S. aureus (VRSA), and Vancomycin-resistant Enterococcus faecium (VREF).
Targets(IC50)	Antibacterial,Antibiotic
In vitro	In vitro studies demonstrate that Pristinamycin possesses broad-spectrum antimicrobial potency. Research indicates that it effectively inhibits the growth of Staphylococcus and Streptococcus species, with a minimum inhibitory concentration (MIC) typically less than or equal to 0.78 mg/L. It remains highly effective against erythromycin-resistant strains [2].
In vivo	In vivo, Pristinamycin activity was evaluated in mice infected with Chlamydia psittaci. At a dose of 100 mg/kg, the antibiotic showed significant activity, effectively reducing mortality rates compared to the 70% mortality observed in the control group [3].

Solubility Information

Solubility	DMSO: 80 mg/mL (57.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7181 mL	3.5905 mL	7.1811 mL
5 mM	0.1436 mL	0.7181 mL	1.4362 mL
10 mM	0.0718 mL	0.3591 mL	0.7181 mL
50 mM	0.0144 mL	0.0718 mL	0.1436 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

Meng J, et al. Improvement of pristinamycin I (PI) production in Streptomyces pristinaespiralis by metabolic engineering approaches. Synth Syst Biotechnol. 2017;2(2):130-136. Published 2017 Jun 8.
Maskell JP, et al. Comparative in-vitro activity of erythromycin, vancomycin and pristinamycin. Infection. 1988;16 (6):365-370.
Orfila J, Haider F. Action de la pristinamycine sur les Chlamydia [Action of pristinamycin on Chlamydia]. Pathol Biol (Paris). 1984;32(5):443-445.