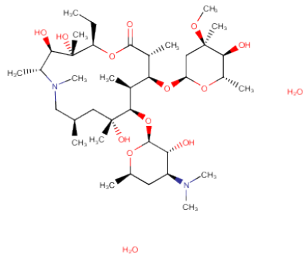
Data Sheet (Cat.No.T1419)

TargetMol®
A DRUG SCREENING EXPERT

Azithromycin hydrate

Chemical Properties



CAS No. : 117772-70-0

Formula: C38H72N2O12·2H2O

Molecular Weight: 785.03

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	Azithromycin hydrate (CP-62993 dihydrate) is a semi-synthetic macrolide antibiotic structurally related to ERYTHROMYCIN. It has been used in the treatment of Mycobacterium avium intracellulare infections, toxoplasmosis, and cryptosporidiosis.
Targets(IC50)	ribosome,Antibacterial,Antibiotic,Autophagy
In vivo	Azithromycin (50 mg/kg) does not alter bronchoalveolar lavage inflammatory parameters or LDH levels in a mouse asthma exacerbation model. It also does not induce general inflammation or LDH release, but enhances interferon-stimulated gene expression and MDA5, a pattern recognition receptor, effectively lowering viral load without affecting RIG-I in exacerbating mice[2].
Cell Research	THP-1 cells (106 cells in 1 mL RPMI medium, without antibiotics, growth factors or serum) are seeded in each well of 24-well plates and allowed to settle for 1 hour. Next, 50 µL of the test compound is added followed by 50 µL of LPS (final concentration of 10 µg/mL). After 24h (37°C and 5% CO2) the supernatants and cell pellets are collected (1200 rpm, 5 min). THP-1 cell viability is tested using 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT). MTT is dissolved at 2 mg/mL in PBS and aliquots are stored at -20°C. The MTT assay is performed according to the suppliers instructions. Absorbance of MTT converted into formazan is measured at a wavelength of 570 nm with background subtraction at 630 nm.

Solubility Information

Solubility	H2O: 10 mg/mL (12.73 mM), DMSO: 93 mg/mL (118.5 mM), Ethanol: 93 mg/mL (118.5 mM), (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	1.2738 mL	6.3692 mL	12.7384 mL
5 mM	0.2548 mL	1.2738 mL	2.5477 mL
10 mM	0.1274 mL	0.6369 mL	1.2738 mL
50 mM	0.0255 mL	0.1274 mL	0.2548 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.

Reference

Peters DH, et al. Drugs, 1992, 44(5), 750-799.
Menzel M, et al. Azithromycin augments rhinovirus-induced IFNβ via cytosolic MDA5 in experimental models of