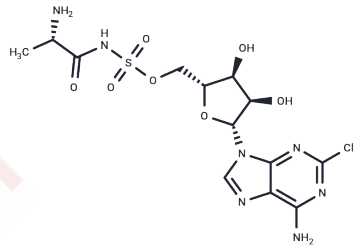
Data Sheet (Cat.No.T14329)

TargetMol

Ascamycin

Chemical Properties



CAS No. : 91432-48-3

Formula: C13H18ClN7O7S

Molecular Weight: 451.84

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	Ascamycin is a 5'-O-sulfonamide ribonucleoside antibiotic produced by Streptomyces spp. It exhibits selective antibacterial activity against Xanthomonas species, inhibiting Xanthomonas citri, Xanthomonas oryzae, and phage with MIC values of 0.4 μg/mL, 12.5 μg/mL, and 12.5 μg/mL respectively.
Targets(IC50)	Nucleoside Antimetabolite/Analog,Antibacterial,Antibiotic
In vitro	Ascamycin has a selective antibacterial activity against Xanthomonas species and it has C2-chloroadenine as the base on C-1' which lacks the chlorine.[1] Xanthomonas citri is susceptible to Ascamycin by virtue of the Ascamycin-dealanylating enzyme on the cell surface, When Ascamycin is dealanylated, Dealanylascamycin shows a broad antibacterial activity against various Gram-negative and Gram-positive bacteria.[2]

Solubility Information

Solubility	DMSO: 10 mg/mL (22.13 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.2132 mL	11.0659 mL	22.1317 mL
5 mM	0.4426 mL	2.2132 mL	4.4263 mL
10 mM	0.2213 mL	1.1066 mL	2.2132 mL
50 mM	0.0443 mL	0.2213 mL	0.4426 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

Isono K, et al. Ascamycin and dealanylascamycin, nucleoside antibiotics from Streptomyces sp. J Antibiot (Tokyo). 1984 ; 37(6):670-672.
Osada H, rt al. Purification and characterization of ascamycin-hydrolysing aminopeptidase from Xanthomonas citri. Biochem J. 1986 ; 233(2):459-463.
Zhao C, et al. Characterization of biosynthetic genes of ascamycin/dealanylascamycin featuring a 5'-O-sulfonamide moiety in Streptomyces sp. JCM9888. PLoS One. 2014 ; 9(12):e114722.

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