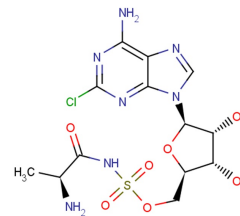


Ascamycin

Chemical Properties

CAS No.:	91432-48-3
Formula:	C13H18ClN7O7S
Molecular Weight:	451.84
Appearance:	N/A
Storage:	0-4°C for short term (days to weeks), or -20°C for long term (months).



Biological Description

Description	Ascamycin has a selective antibacterial activity against Xanthomonas species with MIC values of 0.4 µg/mL, 12.5 µg/mL and 12.5 µg/mL for Xanthomonas citri, Xanthomonas oryzae and Mycobacterium phlei, respectively[1][2] [3]. Ascamycin is a 5'-O-sulfonamide ribonucleoside antibiotic produced by Streptomyces sp. JCM9888.
Targets(IC ₅₀)	Xanthomonas citri: (MIC) 0.4 µg/ml Xanthomonas oryzae: 12.5 µg/ml Mycobacterium phlei: 12.5 µg/ml
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-dealanylation enzyme on the cell surface[2]. When Ascamycin is dealanylated, Dealanylascamycin shows a broad antibacterial activity against various Gram-negative and Gram-positive bacteria.

Solubility Information

Solubility	< 1 mg/ml refers to the product slightly soluble or insoluble
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.213 mL	11.066 mL	22.132 mL
5 mM	0.443 mL	2.213 mL	4.426 mL
10 mM	0.221 mL	1.107 mL	2.213 mL
50 mM	0.044 mL	0.221 mL	0.443 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. The storage conditions and period of the stock solution: - 80 °C for 6 months; - 20 °C for 1 month. Please use it as soon as possible.

Reference

1. Isono K, et al. Ascamycin and dealanylascamycin, nucleoside antibiotics from *Streptomyces* sp. *J Antibiot* (Tokyo). 1984 Jun;37(6):670-2.
2. Osada H, et al. Purification and characterization of ascamycin-hydrolysing aminopeptidase from *Xanthomonas citri*. *Biochem J*. 1986 Jan 15;233(2):459-63.
3. Zhao C, et al. Characterization of biosynthetic genes of ascamycin/dealanylascamycin featuring a 5'-O-sulfonamide moiety in *Streptomyces* sp. JCM9888. *PLoS One*. 2014 Dec 5;9(12):e114722.

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