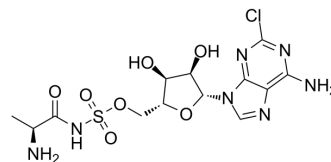


Ascamycin

Cat. No.:	HY-121071
CAS No.:	91432-48-3
Molecular Formula:	C ₁₃ H ₁₈ ClN ₇ O ₇ S
Molecular Weight:	451.84
Target:	Bacterial; Nucleoside Antimetabolite/Analog
Pathway:	Anti-infection; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Ascamycin is a 5'-O-sulfonamide ribonucleoside antibiotic produced by <i>Streptomyces</i> sp. JCM9888. Ascamycin has a selective antibacterial activity against <i>Xanthomonas</i> species with MIC values of 0.4 µg/mL, 12.5 µg/mL and 12.5 µg/mL for <i>Xanthomonas citri</i> , <i>Xanthomonas oryzae</i> and <i>Mycobacterium phlei</i> , respectively ^{[1][2][3]} .
IC₅₀ & Target	MIC: 0.4 µg/mL (<i>Xanthomonas citri</i>), 12.5 µg/mL (<i>Xanthomonas oryzae</i>) and 12.5 µg/mL (<i>Mycobacterium phlei</i>) ^[1]
In Vitro	The Ascamycin has C2-chloroadenine as the base on C-1' which lacks the chlorine ^[1] . Ascamycin has a selective antibacterial activity against <i>Xanthomonas</i> species. When Ascamycin is dealanylated, Dealanylascamycin shows a broad antibacterial activity against various Gram-negative and Gram-positive bacteria. <i>Xanthomonas citri</i> is susceptible to Ascamycin by virtue of the Ascamycin-dealanylation enzyme on the cell surface ^[2] . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

- [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.

Caution: Product has not been fully validated for medical applications. For research use only.

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA