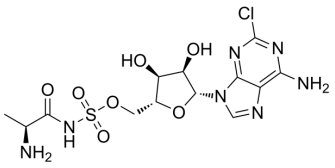
Ascamycin

Cat. No.:	HY-121071
CAS No.:	91432-48-3
Molecular Formula:	$C_{13}H_{18}ClN_7O_7S$
Molecular Weight:	451.84
Target:	Nucleoside Antimetabolite/Analog; Bacterial; Antibiotic
Pathway:	Cell Cycle/DNA Damage; Anti-infection
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 Streptomyces sp. JCM9888. 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].
IC_{50} & Target	MIC: 0.4 μg/mL (Xanthomonas citri), 12.5 μg/mL (Xanthomonas oryzae) and 12.5 μg/mL (Mycobacterium phlei)[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 Xanthomonas species. When Ascamycin is dealanylated, Dealanylascamycin shows a broad antibacterial activity against various Gram-negative and Gram-positive bacteria. Xanthomonas citri is susceptible to Ascamycin by virtue of the Ascamycin-dealanylating 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, rt 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.

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