

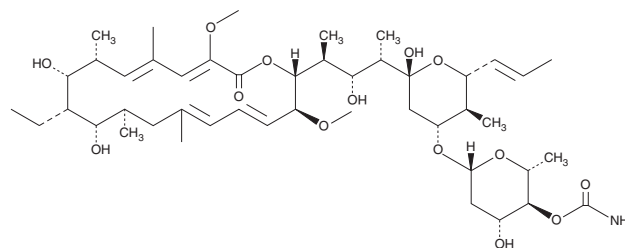
PRODUCT INFORMATION



Concanamycin A

Item No. 11050

CAS Registry No.: 80890-47-7
Formal Name: (3Z,5E,7R,8R,9S,10S,11R,13E,15E,17S,18R)-18-
[[[(1S,2R,3S)-3-[(2R,4R,5S,6R)-4-[[4-O-(aminocarbonyl)-
2,6-dideoxy-β-D-arabino-hexopyranosyl]oxy]tetrahydro-
2-hydroxy-5-methyl-6-(1E)-1-propen-1-yl-2H-pyran-2-
yl]-2-hydroxy-1-methylbutyl]-9-ethyl-8,10-dihydroxy-
3,17-dimethoxy-5,7,11,13-tetramethyl-oxacyclooctadeca-
3,5,13,15-tetraen-2-one



Synonyms: Antibiotic X 4357B, NSC 674620, X 4357B

MF: C₄₆H₇₅NO₁₄

FW: 866.1

Purity: ≥95%

Supplied as: A solution in acetonitrile

Storage: -20°C

Stability: ≥2 years

Item Origin: Bacterium/*Streptomyces* sp.

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Concanamycin A is supplied as a solution in acetonitrile. To change the solvent, simply evaporate the acetonitrile under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as methanol and DMSO, purged with an inert gas can be used.

Description

Concanamycin A is a plecomacrolide antibiotic that has been found in *Streptomyces*.¹ It is active against *S. cerevisiae*, *S. sake*, *A. citri*, *P. citrinum*, and *P. oryzae* (MICs = <0.39, <0.39, <0.39, 1.56, and 25 µg/ml, respectively). Concanamycin A inhibits vacuolar H⁺-ATPase (V-ATPase; EC₅₀ = ~2.1-2.3 µM),² It also decreases perforin levels in CD8⁺ OE4 cytotoxic T lymphocytes (CTLs).³ Concanamycin A (100 µM) inhibits concanavalin A-induced thymidine incorporation by 99% in isolated mouse splenic lymphocytes.¹ It also prevents influenza virus entry into MDCK cells when used at a concentration of 0.8 µM.⁴

References

1. Kinashi, H., Someno, K., and Sakahguchi, K. Isolation and characterization of concanamycins A, B and C. *J. Antibiot. (Tokyo)* **37(11)**, 1333-1343 (1984).
2. Johnson, R.M., Allen, C., Melman, S.D., et al. Identification of inhibitors of V-ATPase pumps in yeast by HTS flow cytometry. *Anal. Biochem.* **398(2)**, 203-211 (2010).
3. Kataoka, T., Takaku, K., Magae, J., et al. Acidification is essential for maintaining the structure and function of lytic granules of CTL. Effect of concanamycin A, an inhibitor of vacuolar type H⁺-ATPase, on CTL-mediated cytotoxicity. *J. Immunol.* **153(9)**, 3938-3947 (1994).
4. Guinea, R. and Carrasco, L. Requirement for vacuolar proton-ATPase activity during entry of influenza virus into cells. *J. Virol.* **69(4)**, 2306-2312 (1995).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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