

**Product Name:** Concanamycin A

**Product Number:** C182

**CAS Number:** 80890-47-7

**Molecular Formula:**  $C_{46}H_{75}NO_{14}$

**Molecular Weight:** 866.1

**Appearance:** White Solid

**Storage Conditions:** -20°C

**Description:** Concanamycin A is the major analogue of the concanamycin complex produced by *Streptomyces* sp.. It has been shown to act as a potent and specific vacuolar-ATPase inhibitor. Concanamycin A inhibits the acidification of organelles and blocks cell surface expression of viral envelope glycoproteins without affecting their synthesis. It also interferes with intracellular protein trafficking and inhibits perforin- and Fas-based lytic pathways in cell-mediated cytotoxicity. Concanamycins are structurally related to the bafilomycins.

Concanamycin A is soluble in ethanol, methanol, DMF and DMSO.

**Mechanism of Action:** Concanamycin A inhibits the acidification of organelles and blocks cell surface expression of viral envelope glycoproteins without affecting their synthesis. It also interferes with intracellular protein trafficking and inhibits perforin- and Fas-based lytic pathways in cell-mediated cytotoxicity.

**References:** The V-ATPase inhibitors concanamycin A and bafilomycin A lead to Golgi swelling in tobacco BY-2 cells. Robinson D.G. et al. , *Protoplasma* 2004, 224, 255.

Concanamycin A, a powerful tool for characterization and estimation of contribution of perforin- and Fas-based lytic pathways in cell-mediated cytotoxicity. Kataoka T. et al. , *J. Immunol.* 1996, 156, 3678.

Specific inhibitors of vacuolar type H(+)-ATPases induce apoptotic cell death. Nishihara T. et al. , *Biochem. Biophys. Res. Commun.* 1995, 212, 255.

Folimycin (concanamycin A), a specific inhibitor of V-ATPase, blocks intracellular translocation of the glycoprotein of vesicular stomatitis virus before arrival to the Golgi apparatus. Muroi M. et al. , *Cell Struct. Funct.* 1993, 18, 139.