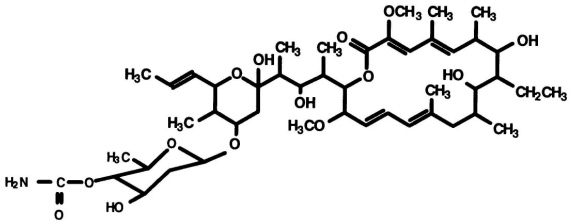
PRODUCT DATA SHEET

Product: Folimycin (Concanamycin A)

Cat. No: MT-802 (1 mg)



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

Molecular Weight: 866.10

Description:
Folimycin is a highly sensitive and specific inhibitor of vacuolar-type H+-ATPase. It inhibits acidification of organelles such as lysosomes and the Golgi apparatus. Folimycin also blocks cell surface expression of viral envelope glycoproteins without affecting their synthesis. Folimycin has many applications in studies of intracellular protein translocation or V-ATPase.

Folimycin is more potent than bafilomycin A_1, with an IC_{50} about 4 times lower, and has a slightly different active site. Folimycin requires 1/10 the dose of bafilomycin A_1 for inhibiting lysosome acidification and V-ATPase activity.

Format:
Lyophilized solid.

Inhibitory Data:

Type of ATPase	IC50 (nM)
V type	9.2
F type	>20,000
P type	>20,000
Na+/K+-ATPase	>20,000

Solubility:
Folimycin is very soluble in chloroform, ethanol, methanol, acetone, ethyl acetate, and DMSO. DMSO is the solvent of choice. A stock solution should be prepared immediately before use by adding DMSO. Vial holds approximately 1.6 ml.

Storage and Stability:
Folimycin should be stored at –20°C in an air-tight, light-resistant container. For short term storage, 4°C is acceptable.

References:
1. Drose, S. et al. (1993). Inhibitory effect of modified bafilomycins and concanamycins on P- and V-type ATPases. Biochem. 32 (15): 3902-906.
2. Muroi, M. et al. (1993). Folimycin, a specific inhib. of V-ATPase, blocks intracell. transloc. of the glycoprotein of vesic. stom. virus before arrival to the G. apparatus. Cell Struct. Funct. 18 (3): 139-149.
3. Muroi, M. et al. (1993). Folimycin, an inhibitor of V-Type H+-ATPase, blocks cell surface expression of virus envelope glycoproteins. Biochem. Biophys. Res. Commun. 193 (3): 999-1005.
4. Yilla, M. et al. (1993). Involvement of vacuolar H(+)-ATPases in the secr. pathway of HepG2 cells. J. Biol. Chem. 268 (25): 19092-100.
5. Muroi, M. et al. (1994). Folimycin (concanamycin A) and bafilomycin A1, inhibitors specific for V-ATPase, exert similar but distinct effects on intracellular translocation and processing of glycoproteins. Biosc. Biotech. Biochem. 58 (2): 425-27.

Limitations:
For *in vitro* research use only. Not for use in diagnostics or in humans.

Warranty:
No warranties, expressed or implied, are made regarding the use of this product. KAMIYA BIOMEDICAL COMPANY is not liable for any damage, personal injury, or economic loss caused by this product.