

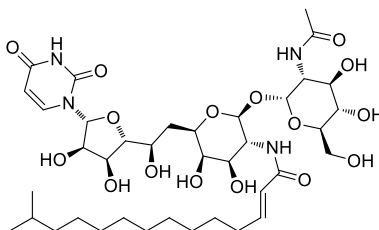


Catalog # 10-2111

Tunicamycin

CAS# 11089-65-9

Lot # X101721



Fermentation product from *Streptomyces lysosuperificus*. Provided as a mixture of tunicamycin A (C₁₄), B (C₁₅), C (C₁₆) and D (C₁₇) homologs varying in the number of carbon atoms in the fatty acid chain. The structure shown above is for tunicamycin B (the C₁₅ homolog)

Potent inhibitor of GlcNAc phosphotransferase which thereby inhibits glycoprotein biosynthesis¹. Causes endoplasmic reticulum stress-induced autophagy² and unfolded protein response³. Arrests cell cycle in late G1⁴.

- 1) Langan *et al.* (1991), *Isoprenoids and astroglial cell cycling: diminished mevalonate availability and inhibition of dolichol-linked glycoprotein synthesis arrest cycling through distinct mechanisms*; J. Cell Physiol., **149** 284
- 2) Ding *et al.* (2007), *Differential effects of endoplasmic reticulum stress-induced autophagy on cell survival*; J. Biol. Chem., **282** 4702
- 3) Jiang *et al.* (2007), *Tunicamycin sensitizes human melanoma cells to tumor necrosis factor-related apoptosis inducing ligand-induced apoptosis by up-regulation of TRAIL-R2 via the unfolded protein response*; Cancer Res., **67** 5880
- 4) Ishii *et al.* (1987), *Dolichol-linked glycoprotein synthesis in G1 is necessary for DNA synthesis in synchronized primary cultures of cerebral glia*; J. Neurochem., **49** 1606

PHYSICAL DATA

Molecular Weight:	830.94 (Tunicamycin B)
Molecular Formula:	C ₃₈ H ₆₂ N ₄ O ₁₆ (Tunicamycin B)
Purity:	99% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 40 mg/ml) or Ethanol (up to 5 mg/ml with warming)
Physical Description:	White solid
Storage and Stability:	Store as supplied desiccated at room -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 1 month.

Materials provided by Focus Biomolecules are for laboratory research use only and are not intended for human or veterinary applications.