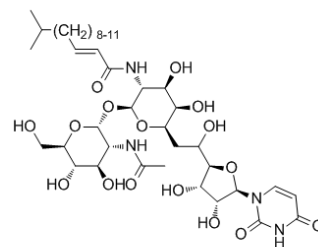


Data Sheet

Product Name:	Tunicamycin
Cat. No.:	HY-A0098
CAS No.:	11089-65-9
Molecular Formula:	C ₃₉ H ₆₄ N ₄ O ₁₆ (n=10)
Molecular Weight:	844.94 (n=10)
Target:	Bacterial
Pathway:	Anti-infection
Solubility:	10 mM in DMSO



BIOLOGICAL ACTIVITY:

Tunicamycin is a mixture of homologous nucleoside antibiotics. An inhibitor of glycosylation. Tunicamycin Blocks the formation of N-glycosidic linkages by inhibiting the first step in glycoprotein synthesis.

In vitro: Tunicamycin causes accumulation of unfolded proteins in cell endoplasmic reticulum (ER). Tunicamycin-induced ER stress suppresses CD44+/CD24- phenotype cell subpopulation. Tunicamycin inhibits invasion, increases cell death, suppresses proliferation and reduces migration in the CD44+/CD24- and CD44+/CD24- rich MCF7 cell culture. [1]

In vivo: Administering tunicamycin further increases protein expression levels of ER stress indicators and inflammatory cytokines, and results in more severe asthma phenotypes in OVALPS-OVA mice. [2]

References:

[1]. Nami B et al. Tunicamycin-induced endoplasmic reticulum stress reduces in vitro subpopulation and invasion of CD44+/CD24- phenotype breast cancer stem cells. *Exp Toxicol Pathol.* 2016 Aug;68(7):419-26.

[2]. Guo Q et al. Tunicamycin Aggravates Endoplasmic Reticulum Stress and Airway Inflammation via PERK-ATF4-CHOP Signaling in a Murine Model of Neutrophilic Asthma. *J Asthma.* 2016 Jul 6

Caution: Product has not been fully validated for medical applications. For research use only.

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