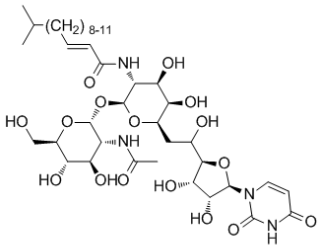
Data Sheet

Product Name:	Tunicamycin
Cat. No.:	HY-A0098
CAS No.:	11089-65-9
Molecular Formula:	C39H64N4O16 (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 inhibite invasion, increase cell death, suppress proliferation and reduce migration in the CD44+/CD24– and CD44+/CD24– rich MCF7 cell culture. [1]

In vivo: Administering tunicamycin further increase protein expression levels of ER stress indicators and inflammatory cytokines, and resulted 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.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA