Product Description
Tunicamycin is a nucleoside antibiotic and an N-acetylglucosamine phosphotransferase inhibitor (Contessa et al.). It also inhibits protein palmitoylation (Patterson & Skene.). Tunicamycin can be used to induce the unfolded protein response and investigate the mechanism of autophagy (Ding et al.).

Molecular Name: Tunicamycin
Alternative Names: Not applicable
CAS Number: 11089-65-9
Chemical Formula: C_{39}H_{64}N_{4}O_{16} (Tunicamycin VII)
Molecular Weight: 845.0 g/mol
Purity: ≥ 95% (mixture of congeners)
Chemical Name: Tunicamycins II,V,VII,X

Properties
Physical Appearance: A crystalline solid
Storage: Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage, store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:
• DMSO ≤ 20 mM

For example, to prepare a 10 mM stock solution in DMSO, resuspend 1 mg in 118 μL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application.

Compound has low solubility in aqueous media. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.
Published Applications

CANCER RESEARCH
· Radiosensitizes human pancreatic cancer cells to chemotherapy (Contessa et al.).
· Induces endoplasmic reticulum stress and autophagy in cancer cells (Ding et al.).

References

Related Small Molecules
For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.

This product is hazardous. Please refer to the Safety Data Sheet (SDS).

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