Cycloheximide
Item No. 14126

CAS Registry No.: 66-81-9
Formal Name: 4-[(2R)-2-[(1S,3S,5S)-3,5-dimethyl-2-oxocyclohexyl]-2-hydroxyethyl]-2,6-piperidinedione
Synonyms: Naramycin A, NSC 185
MF: C_{15}H_{23}NO_{4}
FW: 281.4
Purity: ≥95%
UV/Vis.: \( \lambda_{\text{max}} \): 206 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

Cycloheximide is supplied as a crystalline solid. A stock solution may be made by dissolving the cycloheximide in the solvent of choice. Cycloheximide is soluble in organic solvents such as ethanol and DMSO, which should be purged with an inert gas. It is also soluble in water. The solubility of cycloheximide in ethanol and DMSO is approximately 25 mg/ml and approximately 20 mg/ml in water. We do not recommend storing the aqueous solution for more than one day.

Description

Cycloheximide is a glutarimide antibiotic produced by S. griseus that inhibits protein synthesis in eukaryotes (IC\(_{50} = 5-50 \mu M\)) by interfering with translational elongation.\(^1\) Its effects on protein synthesis can either induce or inhibit apoptosis depending on cell type.\(^2\) Cycloheximide is widely used as a tool in molecular biology research for ribosome profiling and translational profiling as well as to determine the half-life of a protein.\(^3,4\)

References