

Product Information Sheet

C1989 Cycloheximide

Synonyms: Actidione, Naramycin A, 3-[2-(3,5-Dimethyl-2-oxocyclohexyl)-2-hydroxyethyl]glutarimide

CAS: 66-81-9

Formula: C₁₅H₂₃NO₄

Mol. Weight: 281.4

Properties

Form: Powder

Appearance: White to Cream

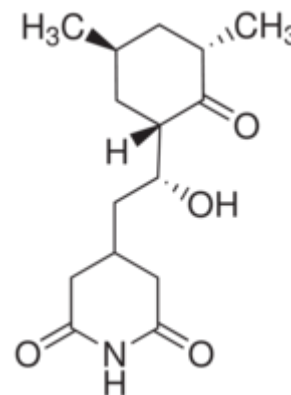
Application: Antibiotic

Solubility: Solubility per the Merck Index in Water at 2% (w/v) or 20 mg/mL. Also soluble in DMSO, Ethanol and other common organic solvents except saturated hydrocarbons.

Storage Temp: 2 to 6 °C

Stock Solution: The Merck Index indicates that in aqueous solution at pH 7, activity is destroyed after 1 hr boiling but not after 15 min boiling. At pH 2 no loss of activity after 1 hr boiling. At room temperature, decomposes rapidly and forms 2,4-dimethylcyclohexanone in dilute alkali conditions.

Typical Working Concentration: 100 – 1000 µg/mL



Application Notes

Cycloheximide is a glutarimide antibiotic derived from *Streptomyces griseus*. It is active against most yeast and fungi and is often used in bacteriological media for isolation and counting of unknown bacteria. It has been reported that cycloheximide inhibits eukaryotic protein synthesis.² Cycloheximide has also been used as a plant growth regulator by inducing the production of ethylene in plants.^{3,4}

Please Note: It is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References

1. Merck Index, 13th Ed, #2757
2. Schneider-Poetsch, Tilman, Jianhua Ju, Daniel E Eyler, Yongjun Dang, Shridhar Bhat, William C Merrick, Rachel Green, Ben Shen, and Jun O Liu. 2010. Inhibition of Eukaryotic Translation Elongation by Cycloheximide and Lactimidomycin. *Nat Chem Biol.* 6(3). 209-217.
3. Steen, David A. and Arthur V. Chadwick. 1973. Effects of Cycloheximide on Indoleacetic Acid-induced Ethylene Production in Pea Root Tips. *Plant Physiol.* 52. 171-173.
4. Wang, Kevin L. Hai Li, and Joseph R. Ecker. 2002. Ethylene Biosynthesis and Signaling Networks. *Plant Cell.* May. 14. S131-S151.

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