

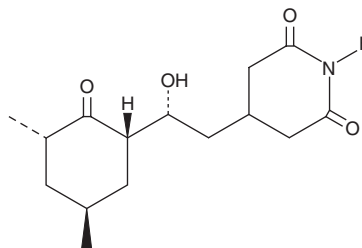
# PRODUCT INFORMATION



## 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<sub>15</sub>H<sub>23</sub>NO<sub>4</sub>  
**FW:** 281.4  
**Purity:** ≥95%  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Cycloheximide is supplied as a crystalline solid. A stock solution may be made by dissolving the cycloheximide in the solvent of choice, which should be purged with an inert gas. Cycloheximide is soluble in organic solvents such as ethanol and DMSO. It is also soluble in water. The solubility of cycloheximide in ethanol, DMSO, and water is approximately 25 and 20 mg/ml, respectively. 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<sub>50</sub> = 5-50 μM) by interfering with translational elongation.<sup>1</sup> Its effects on protein synthesis can either induce or inhibit apoptosis depending on cell type.<sup>2</sup> 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.<sup>3,4</sup>

### References

- Obrig, T.G., Culp, W.J., McKeehan, W.L., *et al.* The mechanism by which cycloheximide and related glutarimide antibiotics inhibit peptide synthesis on reticulocyte ribosomes. *J. Biol. Chem.* **246**, 174-181 (1971).
- Baskic, D., Popovic, S., Ristic, P., *et al.* Analysis of cycloheximide-induced apoptosis in human leukocytes: Fluorescence microscopy using annexin V/propidium iodide versus acridin orange/ethidium bromide. *Cell Biol. Int.* **30**, 924-932 (2006).
- Lee, S., Liu, B., Lee, S., *et al.* Global mapping of translation initiation sites in mammalian cells at single-nucleotide resolution. *Proc. Natl. Acad. Sci. USA* **109**(37), E2424-E2432 (2012).
- Jiang, X., Coffino, P., and Li, X. Development of a method for screening short-lived proteins using green fluorescent protein. *Genome Biol.* **5**(10), R81 (2004).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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