

Certificate of Analysis

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Product Name: Thiostrepton

Catalog No.: 3267

Batch No.: 4

CAS Number: 1393-48-2

EC Number: 215-734-9

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₇₂H₈₅N₁₉O₁₈S₅

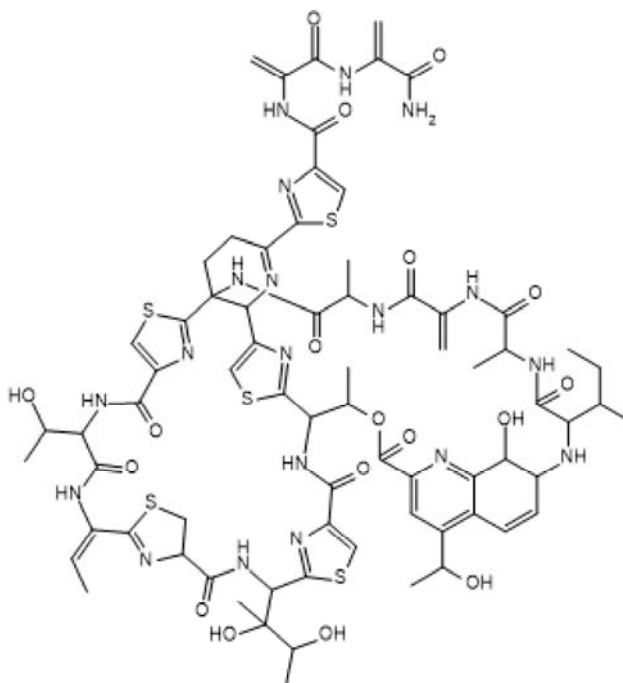
Batch Molecular Weight: 1664.89

Physical Appearance: White solid

Solubility: DMSO to 10 mM

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 96.9% purity

Mass Spectrum: Consistent with structure

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Product Information

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Product Name: Thiostrepton

Catalog No.: 3267

Batch No.: 4

CAS Number: 1393-48-2

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Description:

Antibiotic that inhibits bacterial protein synthesis. Inhibits mRNA-tRNA translocation by GTPase elongation factor G (EF-G), EF-TU(GTP)-catalyzed aa-tRNA delivery and the activity of initiation factor 2 (IF-2). Antitumor agent; induces cell cycle arrest and apoptosis in breast cancer cells via downregulation of FOXM1 expression.

Physical and Chemical Properties:

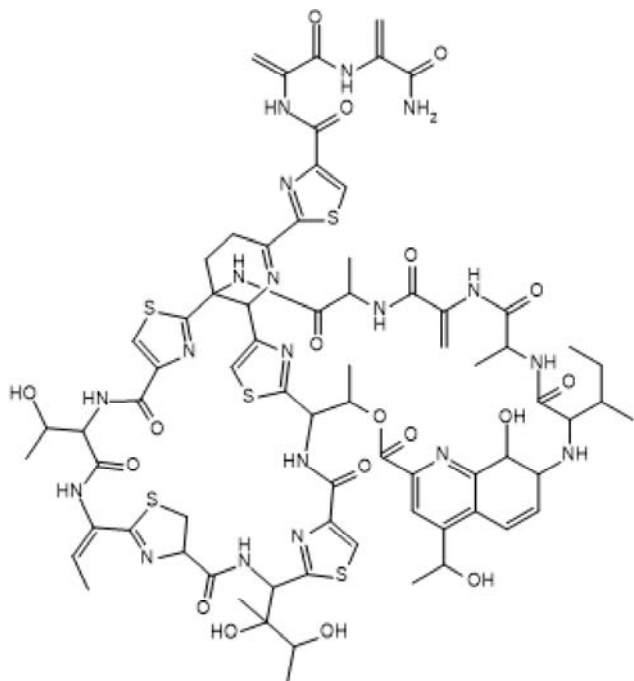
Batch Molecular Formula: C₇₂H₈₅N₁₉O₁₈S₅

Batch Molecular Weight: 1664.89

Physical Appearance: White solid

Minimum Purity: >90%

Batch Molecular Structure:



Storage: Store at -20°C

CAUTION - This product is light sensitive and we recommend that the solid material and any solutions obtained are protected from exposure to light.

Solubility & Usage Info:

DMSO to 10 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Kwok et al (2008) Thiostrepton selectively targets breast cancer cells through inhibition of forkhead box M1 expression. *Mol.Cancer Ther.* **7** 2022. PMID: 18645012.

Ruben et al (2007) Thiostrepton inhibition of tRNA delivery to the ribosome. *RNA* **13** 2091. PMID: 17951333.

Rodnina et al (1999) Thiostrepton inhibits the turnover but not the GTPase of elongation factor G on the ribosome. *Proc.Natl.Acad.Sci.USA* **96** 9586.

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