

**Product Name:** Daptomycin

**Catalog No.:** 3917

**Batch No.:** 2

CAS Number: 103060-53-3

IUPAC Name: *N*-(1-Oxodecyl)-L-tryptophyl-D-asparaginyl-L- $\alpha$ -aspartyl-L-threonylglycyl-L-ornithinyl-L- $\alpha$ -aspartyl-D-alanyl-L- $\alpha$ -aspartylglycyl-D-seryl-(3*R*)-3-methyl-L- $\alpha$ -glutamyl- $\alpha$ ,2-diamino- $\gamma$ -oxo-benzene butanoic acid (13-4) lactone

**1. PHYSICAL AND CHEMICAL PROPERTIES**

**Batch Molecular Formula:** C<sub>72</sub>H<sub>101</sub>N<sub>17</sub>O<sub>26</sub>·4H<sub>2</sub>O

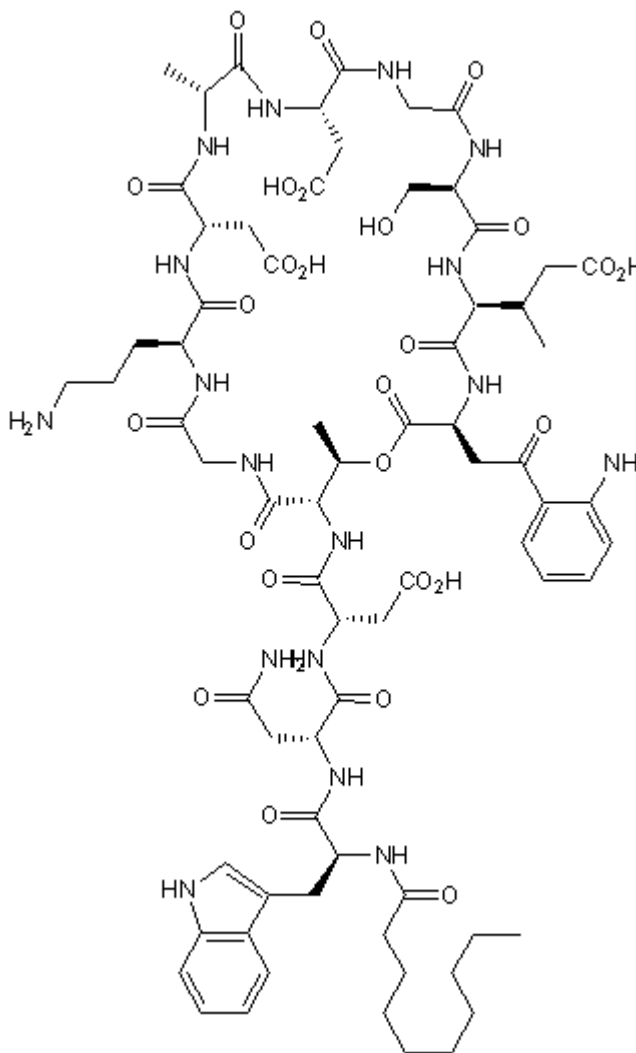
**Batch Molecular Weight:** 1692.73

**Physical Appearance:** Pale yellow solid

**Solubility:** DMSO to 100 mM  
water to 20 mM

**Storage:** Store at -20°C

**Batch Molecular Structure:**



**2. ANALYTICAL DATA**

**HPLC:** Shows 98.3% purity

**<sup>1</sup>H NMR:** Consistent with structure

**Mass Spectrum:** Not Fully Tested • Research Use Only • Not for Human or Veterinary Use

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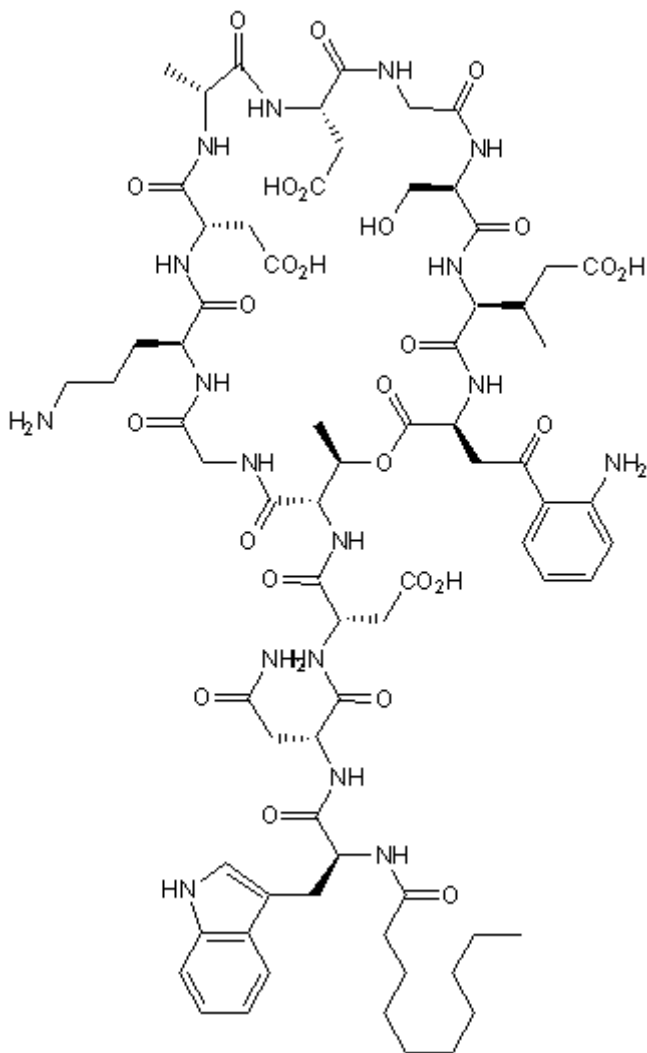
IUPAC Name: *N*-(1-Oxododecyl)-L-tryptophyl-D-asparaginyl-L- $\alpha$ -aspartyl-L-threonylglycyl-L-ornithinyl-L- $\alpha$ -aspartyl-D-alanyl-L- $\alpha$ -aspartylglycyl-D-seryl-(3*R*)-3-methyl-L- $\alpha$ -glutamyl- $\alpha$ ,2-diamino- $\gamma$ -oxo-benzene butanoic acid (13-4) lactone**Description:**

Lipopeptide, calcium-dependent antibiotic. Exhibits potent bacteriocidal activity against most gram-positive bacteria in vitro and in vivo, including antibiotic-resistant strains such as MRSA and VRE. Disrupts plasma membrane function; activity results in membrane depolarization leading to inhibition of protein, DNA and RNA synthesis.

**Physical and Chemical Properties:**Batch Molecular Formula: C<sub>72</sub>H<sub>101</sub>N<sub>17</sub>O<sub>26</sub>·4H<sub>2</sub>O

Batch Molecular Weight: 1692.73

Physical Appearance: Pale yellow solid

**Minimum Purity:** >95%**Batch Molecular Structure:****Storage:** Store at -20°C**Solubility & Usage Info:**DMSO to 100 mM  
water to 20 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:**

**Tally and DeBruin** (2000) Development of daptomycin for gram-positive infections. *J.Antimicrob Chemother.* **46** 523. PMID: 11020247.

**Jung et al** (2004) Structural transitions as determinants of the action of the calcium-dependent antibiotic daptomycin. *Chem.Biol.* **11** 949.

PMID: 15271353.

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

**Steenbergen et al (2005)** Daptomycin: a lipopeptide antibiotic for the treatment of serious gram-positive infections. *J. Antimicrob*

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PMID: 20522545.