

**Product Name:** Geldanamycin

**Catalog No.:** 1368

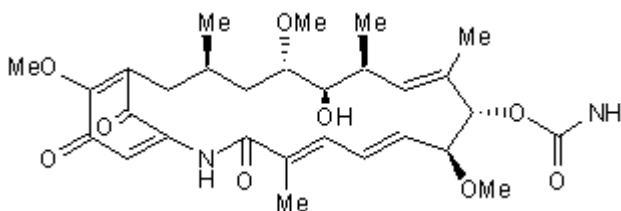
**Batch No.:** 5

**CAS Number:** 30562-34-6

**IUPAC Name:** 9,13-Dihydroxy-8,14,19-trimethoxy-4,10,12,16-tetramethyl-2-azabicyclo[16.3.1]docosa-4,6,10,18,21-pentaene-3,20,22-trione, 9-carbamate

## 1. PHYSICAL AND CHEMICAL PROPERTIES

|                                   |   |
|-----------------------------------|---|
| <b>Batch Molecular Formula:</b>   | C <sub>29</sub> H <sub>40</sub> N <sub>2</sub> O <sub>9</sub> |
| <b>Batch Molecular Weight:</b>    | 560.64  |
| <b>Physical Appearance:</b>       | Orange solid  |
| <b>Solubility:</b>                | Soluble in DMSO   |
| <b>Storage:</b>                   | Desiccate at -20°C  |
| <b>Batch Molecular Structure:</b> |   |



## 2. ANALYTICAL DATA

|                       |                           |
|-----------------------|---------------------------|
| <b>HPLC:</b>          | Shows 99.2% purity        |
| <b>Mass Spectrum:</b> | Consistent with structure |

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

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**Description:**

Selectively inhibits heat shock protein 90 (Hsp90). Binds to the ATP site of Hsp90 ( $K_d = 1.2 \mu\text{M}$ ) and inhibits its chaperone activity. Consequently inhibits activities of oncogenic kinases (e.g. src, Raf), p53 and steroid receptors. Demonstrates anti-proliferative effects on breast cancer cells in a dose dependent manner.

**Physical and Chemical Properties:**

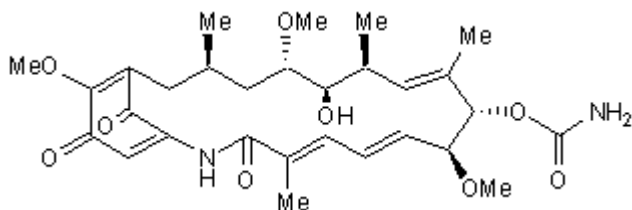
Batch Molecular Formula:  $\text{C}_{29}\text{H}_{40}\text{N}_2\text{O}_9$

Batch Molecular Weight: 560.64

Physical Appearance: Orange solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**Storage:** Desiccate at  $-20^\circ\text{C}$

**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:**

Soluble in DMSO

**Stability and Solubility Advice:**

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a  $45\text{-}60^\circ\text{C}$  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  $-20^\circ\text{C}$  or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

**References:**

**Whitesell et al (1994)** Inhibition of heat shock protein HSP90-pp60v-src heteroprotein complex formation by benzoquinone ansamycins: essential role for stress proteins in oncogenic transformation. *Proc.Natl.Acad.Sci.U.S.A.* **91** 8324. PMID: 8078881.

**Cardenas et al (1998)** Signal-transduction cascades as targets for therapeutic intervention by natural products. *Trends Biotechnol.* **16** 427. PMID: 9807840.

**Roe et al (1999)** Structural basis for inhibition of the Hsp90 molecular chaperone by the antitumor antibiotics radicicol and geldanamycin. *J.Med.Chem.* **42** 260. PMID: 9925731.

**Lee et al (2012)** Inhibition of heat shock protein (Hsp) 27 potentiates the suppressive effect of Hsp90 inhibitors in targeting breast cancer stem-like cells. *Biochimie.* **94** 1382. PMID: 22445681.

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