

Product Name: Geldanamycin

Catalog No.: 1368

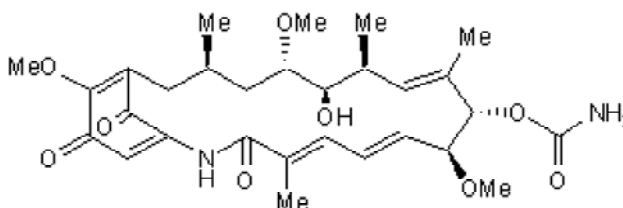
Batch No.: 5

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

Batch Molecular Formula:	C ₂₉ H ₄₀ N ₂ O ₉
Batch Molecular Weight:	560.64
Physical Appearance:	Orange solid
Solubility:	DMSO to 10 mM
Storage:	Desiccate at -20°C
Batch Molecular Structure:	



2. ANALYTICAL DATA

HPLC:	Shows 99.0% purity
Mass Spectrum:	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 antiproliferative effect on breast cancer stem-like cells.

Physical and Chemical Properties:

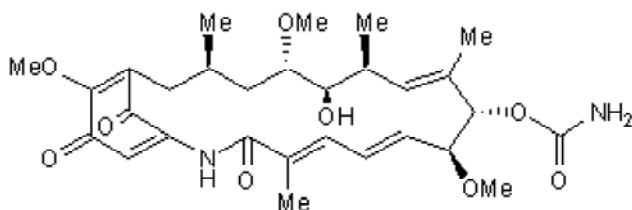
Batch Molecular Formula: $\text{C}_{29}\text{H}_{40}\text{N}_2\text{O}_9$

Batch Molecular Weight: 560.64

Physical Appearance: Orange solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Desiccate at -20°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

This product is supplied as a lyophilized solid and may be very hard to visualize. Solutions should be made by adding solvent directly to the vial. The vial should then be vortexed vigorously to ensure the product has completely dissolved.

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°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

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.

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.

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

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.

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