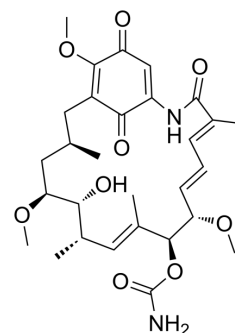


## Geldanamycin

<b>Cat. No.:</b>	HY-15230		
<b>CAS No.:</b>	30562-34-6		
<b>Molecular Formula:</b>	C <sub>29</sub> H <sub>40</sub> N <sub>2</sub> O <sub>9</sub>		
<b>Molecular Weight:</b>	560.64		
<b>Target:</b>	HSP; Bacterial; Influenza Virus; Antibiotic		
<b>Pathway:</b>	Cell Cycle/DNA Damage; Metabolic Enzyme/Protease; Anti-infection		
<b>Storage:</b>	Powder	-20°C	3 years
		4°C	2 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 25 mg/mL (44.59 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
<b>Preparing Stock Solutions</b>	<b>1 mM</b>	1.7837 mL	8.9184 mL	17.8368 mL
	<b>5 mM</b>	0.3567 mL	1.7837 mL	3.5674 mL
	<b>10 mM</b>	0.1784 mL	0.8918 mL	1.7837 mL
Please refer to the solubility information to select the appropriate solvent.				
<b>In Vivo</b>	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (4.46 mM); Suspended solution; Need ultrasonic  2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 2.5 mg/mL (4.46 mM); Suspended solution; Need ultrasonic			

### BIOLOGICAL ACTIVITY

<b>Description</b>	Geldanamycin is a Hsp90 inhibitor with antimicrobial activity against many Gram-positive and some Gram-negative bacteria. Geldanamycin has anti-influenza virus H5N1 activities.
<b>IC<sub>50</sub> &amp; Target</b>	HSP90 1.2 μM (Kd)
<b>In Vitro</b>	Geldanamycin significantly delays and reduces viperin expression, indicating that IRF3 is involved in viperin induction in RAW264.7 cells <sup>[1]</sup> . Geldanamycin, a benzoquinone ansamycin, protected against neuronal injury induced by oxygen-glucose deprivation (OGD)/zVAD treatment in cultured primary neurons. More importantly, Geldanamycin decreases RIP1 protein level in a time

and concentration-dependent manner. Geldanamycin also decreases the Hsp90 protein level, which causes instability of RIP1 protein, resulting in decreased RIP1 protein level but not RIP1 mRNA level after Geldanamycin treatment<sup>[2]</sup>. Geldanamycin is identified as the first natural product inhibitor of Hsp90 that binds to the N-terminal ATPase domain of Hsp90 to inhibit its chaperone function, and significantly induces tumor cell death via an apoptotic mechanism<sup>[3]</sup>. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- Nat Commun. 2022 Aug 29;13(1):4942.
- Nat Commun. 2021 May 10;12(1):2587.
- Nucleic Acids Res. 2020 Aug 20;48(14):7944-7957.
- Autophagy. 2023 Jun 13;1-17.
- New Phytol. 2023 Jan 27.

See more customer validations on [www.MedChemExpress.com](http://www.MedChemExpress.com)

## REFERENCES

- [1]. Tang HB, et al. Viperin inhibits rabies virus replication via reduced cholesterol and sphingomyelin and is regulated upstream by TLR4. *Sci Rep.* 2016 Jul 26;6:30529
- [2]. Chen WW, et al. RIP1 mediates the protection of Geldanamycin on neuronal injury induced by oxygen-glucose deprivation combined with zVAD in primary cortical neurons. *J Neurochem.* 2012 Jan;120(1):70-7.
- [3]. Lin Z, et al. 17-ABAG, a novel Geldanamycin derivative, inhibits LNCaP-cell proliferation through heat shock protein 90 inhibition. *Int J Mol Med.* 2015 Aug;36(2):424-32.
- [4]. Roe SM, et al. Structural basis for inhibition of the Hsp90 molecular chaperone by the antitumor antibiotics radicicol and geldanamycin. *J Med Chem.* 1999 Jan 28;42(2):260-6.
- [5]. Wang C, et al. Geldanamycin Reduces Acute Respiratory Distress Syndrome and Promotes the Survival of Mice Infected with the Highly Virulent H5N1 Influenza Virus. *Front Cell Infect Microbiol.* 2017 Jun 15;7:267.

**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA