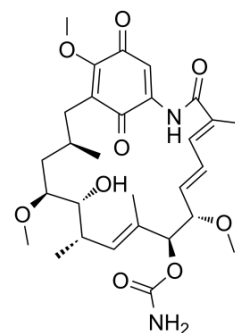


Geldanamycin

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



SOLVENT & SOLUBILITY

In Vitro

DMSO : ≥ 24 mg/mL (42.81 mM)
 H₂O : < 0.1 mg/mL (insoluble)
 * "≥" means soluble, but saturation unknown.

	Solvent Concentration	Mass		
		1 mg	5 mg	10 mg
Preparing Stock Solutions	1 mM	1.7837 mL	8.9184 mL	17.8368 mL
	5 mM	0.3567 mL	1.7837 mL	3.5674 mL
	10 mM	0.1784 mL	0.8918 mL	1.7837 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

- Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
 Solubility: 2.17 mg/mL (3.87 mM); Suspended solution; Need ultrasonic
- Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
 Solubility: 2.17 mg/mL (3.87 mM); Suspended solution; Need ultrasonic

BIOLOGICAL ACTIVITY

Description	Geldanamycin is a Hsp90 inhibitor with antimicrobial activity against many Gram-positive and some Gram-negative bacteria. Geldanamycin has anti-influenza virus H5N1 activities.
IC ₅₀ & Target	HSP90 1.2 μM (Kd)
In Vitro	Geldanamycin significantly delays and reduces viperin expression, indicating that IRF3 is involved in viperin induction

in RAW264.7 cells^[1]. Geldanamycin (GA), 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^[2]. Geldanamycin (GA) 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^[3].

CUSTOMER VALIDATION

- *Nucleic Acids Res.* 2020 Jul 15;gkaa601.
- *Cell Syst.* 2018 Apr 25;6(4):424-443.e7.
- *J Cell Biochem.* 2019 Sep;120(9):16254-16263.
- *J Cell Biochem.* 2018 Oct 10.

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

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