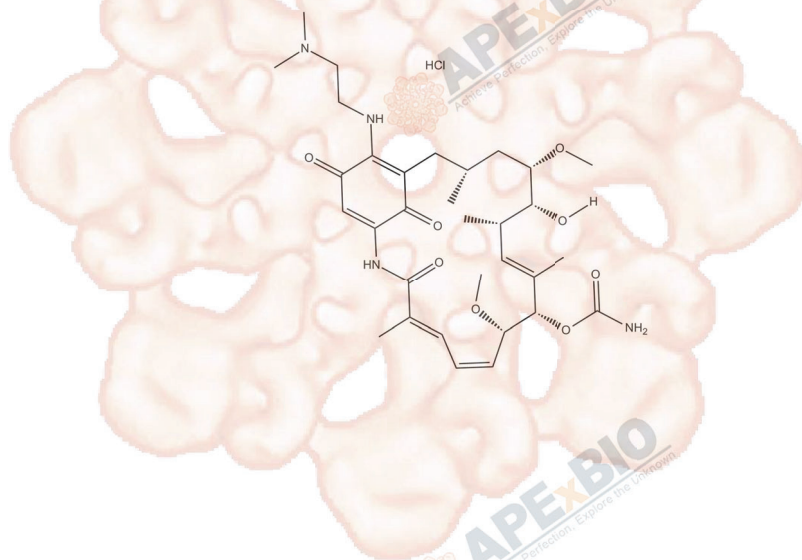


17-DMAG (Alvespimycin) HCl

Cat. No.:	A2213
CAS No.:	467214-21-7
Formula:	C ₃₂ H ₄₈ N ₄ O ₈ ·HCl
M.Wt:	653.21
Synonyms:	
Target:	Metabolism
Pathway:	HSP
Storage:	Store at -20°C



Solvent & Solubility

≥26.2mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Mass		1mg	5mg	10mg
	Solvent	Concentration			
		1 mM	1.5309 mL	7.6545 mL	15.3090 mL
		5 mM	0.3062 mL	1.5309 mL	3.0618 mL
		10 mM	0.1531 mL	0.7655 mL	1.5309 mL

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

Biological Activity

Shortsummary

Hsp90 inhibitor

IC₅₀ & Target

62±29 nM (Hsp90)

In Vitro

Cell Viability Assay

Cell Line:

Chronic lymphocytic leukemia (CLL)

Preparation method:

The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Reacting conditions:

~ 1 μM; 24 or 48 hrs

Applications:

In CLL cells, 17-DMAG effectively led to depletion of the Hsp90 client protein,

decreasing NF- κ B p50/p65 DNA binding, NF- κ B target gene transcription and caspase-dependent apoptosis. By targeting the NF- κ B family, 17-DMAG selectively mediated cytotoxicity against CLL cells (in dose- and time-dependent manner), but not normal T cells or NK cells important for immune surveillance.

Animal experiment

Animal models:	SCID mice engrafted with TCL1 leukemia cells
Dosage form:	10 mg/kg; i.p.; 5 times per week for 16 days
Applications:	In a TCL1-SCID transplant mouse model, the 17-DMAG treatment (10 mg/kg) significantly decreased the white blood cell count and prolonged the survival.
Other notes:	Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal.

In Vivo

Product Citations

1. Katayama K, Noguchi K, et al. "Heat shock protein 90 inhibitors overcome the resistance to Fms-like tyrosine kinase 3 inhibitors in acute myeloid leukemia." *Oncotarget*. 2018 Sep 28;9(76):34240-34258.PMID:30344940

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References

- [1]. Jie Ge, Emmanuel Normant, James R. Porter, Janid A. Ali, Marlene S. Dembski, Yun Gao, Asimina T. Georges, Louis Grenier, Roger H. Pak, Jon Patterson, Jens R. Sydor, Thomas T. Tibbitts, Jeffrey K. Tong, Julian Adams, and Vito J. Palombella. Design, synthesis and biological evaluation of Hydroquinone derivatives of 17-Amino-17-demethoxygeldanamycin as potent, water-soluble inhibitors of Hsp90. *J. Med. Chem.* 2006, 49, 4606-4615.
- [2]. Hertlein E, Wagner AJ, Jones J, Lin TS, Maddocks KJ, Towns WH 3rd, Goettl VM, Zhang X, Jarjoura D, Raymond CA, West DA, Croce CM, Byrd JC, Johnson AJ. 17-DMAG targets the nuclear factor-kappaB family of proteins to induce apoptosis in chronic lymphocytic leukemia: clinical implications of HSP90 inhibition. *Blood*. 2010 Jul 8;116(1):45-53.

Caution

FOR RESEARCH PURPOSES ONLY.

NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

Specific storage and handling information for each product is indicated on the product datasheet. Most APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.

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