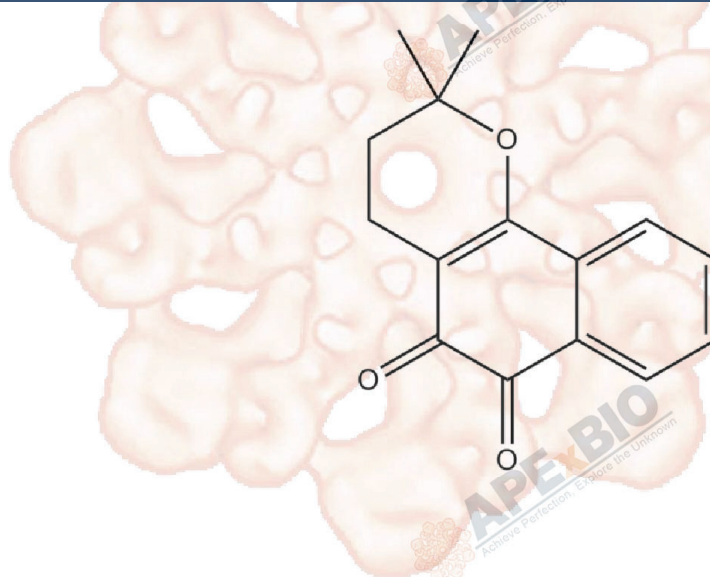


Product Data Sheet

Beta-Lapachone

Cat. No.:	B2290
CAS No.:	4707-32-8
Formula:	C ₁₅ H ₁₄ O ₃
M.Wt:	242.27
Synonyms:	
Target:	DNA Damage/DNA Repair
Pathway:	Topoisomerase
Storage:	Store at -20°C



Solvent & Solubility

insoluble in H₂O; ≥ 10.85 mg/mL in DMSO; ≥ 4.32 mg/mL in EtOH

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		1 mM	4.1276 mL	20.6381 mL	41.2763 mL
		5 mM	0.8255 mL	4.1276 mL	8.2553 mL
		10 mM	0.4128 mL	2.0638 mL	4.1276 mL

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

Biological Activity

Shortsummary	DNA topoisomerase I inhibitor,selective	
IC ₅₀ & Target	0.44 μ M (IDO1)	
In Vitro	Cell Viability Assay	
	Cell Line:	HL-60, PC-3, DU145 and LNCaP cells
	Preparation method:	The solubility of this compound in DMSO is > 10.85 mg/mL. 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:	0.005 ~ 50 μ M; 12 hrs
	Applications:	In H HL-60, PC-3, DU145 and LNCaP cells, Beta-Lapachone at the doses of 1 ~ 5 μ M arrested cells in the G0/G1 phase of the cell cycle. Moreover, Beta-Lapachone induced apoptosis before or at the early stage of DNA synthesis, in a p53-independent manner. The mechanism of Beta-Lapachone-induced apoptosis might be through locking Topo I onto DNA and blocking replication fork movement.
In Vivo	Animal experiment	
	Animal models:	Nude mice bearing human ovarian cancer 36M2 cells
	Dosage form:	25 ~ 50 mg/kg; i.p.
	Applications:	In nude mice bearing human ovarian cancer 36M2 cells, Beta-Lapachone treatment (50 mg/kg) potently inhibited tumor growth. The combination of Beta-Lapachone and Taxol caused a synergistic induction of apoptosis. In addition, mice treated with both drugs appeared to be healthy without reduction in body weight. No gross abnormalities in internal organs were observed from autopsy as well.
	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.

Product Citations

See more customer validations on www.apexbt.com.

References

[1]. Planchon SM, Wuerzberger S, Frydman B, Witiak DT, Hutson P, Church DR, Wilding G, Boothman DA. Beta-lapachone-mediated apoptosis in human promyelocytic leukemia (HL-60) and human prostate cancer cells: a p53-independent response. *Cancer Res.* 1995 Sep 1;55(17):3706-11.

[2]. Li CJ, Li YZ, Pinto AV, Pardee AB. Potent inhibition of tumor survival in vivo by beta-lapachone plus taxol: combining drugs imposes different artificial checkpoints. *Proc Natl Acad Sci U S A.* 1999 Nov 9;96(23):13369-74.

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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