

Catalog # 10-2386

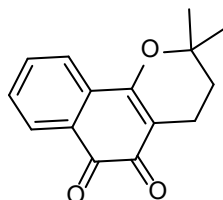
β-Lapachone

CAS# 4707-32-8

3,4-dihydro-2,2-dimethyl-2H-naphtho[1,2-b]pyran-5,6-dione;

NSC-26326

Lot # S105163



A naturally occurring quinone found in the bark of the Lapacho tree (*Tabebuia avellanedae*). A novel DNA topoisomerase I inhibitor which unlike camptothecin does not stabilize the cleavable complex indicating a novel mode of action.¹ Induces apoptosis in a number of cancer cell lines.² In cancer cells overexpressing NAD(P)H:quinone oxidoreductase, reduction of β-lapachone leads to futile cycling between quinone and hydroquinone forms³ resulting in the production of reactive oxygen species⁴. Suppresses radiation-induced activation of NFκB.⁵

- 1) Li *et al.* (1993), *beta-lapachone, a Novel DNA Topoisomerase I Inhibitor With a Mode of Action Different From Camptothecin*; J. Biol. Chem., **268** 22463
- 2) Wuerzberger *et al.* (1998), *Induction of Apoptosis in MCF-7:WS8 Breast Cancer Cells by Beta-Lapachone*; Cancer Res., **58** 1876
- 3) Pink *et al.* (2000), *NAD(P)H:Quinone Oxidoreductase Activity Is the Principal Determinant of Beta-Lapachone Cytotoxicity*. J. Biol. Chem., **275** 5416
- 4) Siegel *et al.* (2012), *NAD(P)H:quinone Oxidoreductase 1 (NQO1) in the Sensitivity and Resistance to Antitumor Quinones*; Biochem. Pharmacol., **83** 1033
- 5) Dong *et al.* (2010), *Beta-lapachone suppresses radiation-induced activation fo nuclear factor-kappaB*; Exp. Mol. Med., **42** 327

PHYSICAL DATA

Molecular Weight:	242.27
Molecular Formula:	C ₁₅ H ₁₄ O ₃
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 35 mg/ml) or in Ethanol (up to 15 mg/ml)
Physical Description:	Orange solid
Storage and Stability:	Store as supplied desiccated at -20°C for up to 2 years from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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