

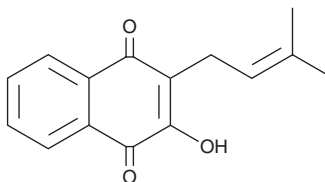
PRODUCT INFORMATION



Lapachol

Item No. 30190

CAS Registry No.: 84-79-7
Formal Name: 2-hydroxy-3-(3-methyl-2-buten-1-yl)-1,4-naphthalenedione
Synonyms: C.I. 75490, NSC 11905, NSC 629756
MF: C₁₅H₁₄O₃
FW: 242.3
Purity: ≥95%
UV/Vis.: λ_{max}: 253, 282 nm
Supplied as: A solid
Storage: -20°C
Stability: ≥2 years
Item Origin: Synthetic



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Lapachol is supplied as a solid. A stock solution may be made by dissolving the lapachol in the solvent of choice, which should be purged with an inert gas. Lapachol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of lapachol in ethanol is approximately 1 mg/ml and approximately 10 mg/ml in DMSO and DMF.

Description

Lapachol is a naphthoquinone originally isolated from *T. impetiginosa* and has diverse biological activities.¹⁻⁵ It is larvicidal against *T. canis* when used at a concentration of 2 mg/ml.¹ Lapachol (10 and 100 μM) inhibits topoisomerase I and topoisomerase II activities, as well as induces apoptosis and DNA damage in C6 rat glioma cells.² It reduces *B. atrox* venom phospholipase A₂ (PLA₂) activity in a turbidimetric assay when used at a concentration of 10 μg/ml.³ Lapachol (3 and 10 mg/kg) reduces synovial leukocyte infiltration and joint destruction in a mouse model of collagen-induced arthritis.⁴ It also reduces carrageenan-induced paw edema and abscess formation in rats.⁵

References

1. Mata-Santos, T., Pinto, N.F., Mata-Santos, H.A., *et al.* Anthelmintic activity of lapachol, β-lapachone and its derivatives against *Toxocara canis* larvae. *Rev. Inst. Med. Trop. Sao Paulo* **57**(3), 197-204 (2015).
2. Xu, H., Chen, Q., Wang, H., *et al.* Inhibitory effects of lapachol on rat C6 glioma in vitro and in vivo by targeting DNA topoisomerase I and topoisomerase II. *J. Exp. Clin. Cancer Res.* **35**(1), 178 (2016).
3. Strauch, M.A., Tomaz, M.A., Monteiro-Machado, M., *et al.* Lapachol and synthetic derivatives: *In vitro* and *in vivo* activities against *Bothrops* snake venoms. *PLoS One* **14**(1), e0211229 (2019).
4. Peres, R.S., Santos, G.B., Cecilio, N.T., *et al.* Lapachol, a compound targeting pyrimidine metabolism, ameliorates experimental autoimmune arthritis. *Arthritis Res. Ther.* **19**(1), 47 (2017).
5. de Almeida, E.R., da Silva Filho, A.A., do Santos, E.R., *et al.* Antiinflammatory action of lapachol. *J. Ethnopharmacol.* **29**(2), 239-241 (1990).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 05/19/2020

CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM