



LKT Laboratories, Inc.

Paclitaxel, from *Taxus yunnanensis*

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Product Information

Product ID P0092

CAS No. 33069-62-4

Chemical Name

Synonym Taxol, Taxol A, Paxene

Formula C₄₇H₅₁NO₁₄

Formula Wt. 853.91

Melting Point 213-217°C

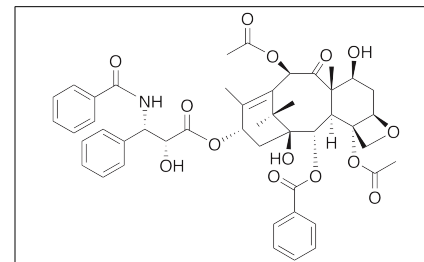
Purity ≥98%

Solubility Insoluble in water (4 mg/L).
Soluble in ethanol (18 mg/mL), DMSO (50 mg/mL).

Store Temp -20°C

Ship Temp Ambient

Description Paclitaxel is a diterpene compound found in *Taxus yunnanensis* that exhibits anticancer chemotherapeutic and anti-angiogenic activities. Paclitaxel induces tubulin polymerization, forming stable but nonfunctional microtubules; it inhibits shortening of microtubule leading edges, decreases peripheral microtubule formation, and alters morphology of focal adhesions, preventing cell migration and proliferation. Paclitaxel also dysregulates the epithelial-to-mesenchymal (EMT) transition, inducing transition of cancer cells into benign fibroblast-like cells. In vitro, paclitaxel induces caspase 8-mediated apoptosis through the association of caspase 8's death effector domain with microtubules.



Bulk quantities available upon request

Product ID	Size
P0092	1 mg
P0092	5 mg
P0092	25 mg
P0092	100 mg

References Kamath K, Smiyun G, Wilson L, et al. Mechanisms of inhibition of endothelial cell migration by taxanes. Cytoskeleton (Hoboken). 2013 Oct 23. [Epub ahead of print]. PMID: 24155271.

Caltová K, Cervinka M. Antiproliferative effects of selected chemotherapeutics in human ovarian cancer cell line A2780. Acta Medica (Hradec Kralove). 2012;55(3):116-24. PMID: 23297519.

Jia L, Zhang S, Ye Y, et al. Paclitaxel inhibits ovarian tumor growth by inducing epithelial cancer cells to benign fibroblast-like cells. Cancer Lett. 2012 Dec 30;326(2):176-82. PMID: 22902993.

Mielgo A, Torres VA, Clair K, et al. Paclitaxel promotes a caspase 8-mediated apoptosis through death effector domain association with microtubules. Oncogene. 2009 Oct 8;28(40):3551-62. PMID: 19668227.

Botta M, Forli S, Magnani M, et al. Molecular modeling approaches to study the binding mode on tubulin of microtubule destabilizing and stabilizing agents. Top Curr Chem. 2009;286:279-328. PMID: 23563616.

Chen YQ, Zhu WH, Wu YQ, et al. Effects of culture conditions on callus growth and taxol formation of *Taxus yunnanensis* Cheng et L.K.Fu. Zhongguo Zhong Yao Za Zhi. 2000 May;25(5):269-72. PMID: 12512447.

Kumar N. Taxol-induced polymerization of purified tubulin. Mechanism of action. J Biol Chem. 1981 Oct 25;256(20):10435-41. PMID: 6116707.

Caution: This product is intended for laboratory and research use only. It is not for human or drug use.