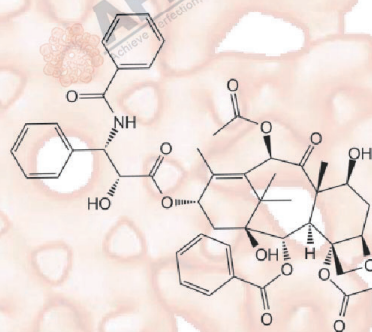


Product Data Sheet

Paclitaxel (Taxol)

Cat. No.:	A4393
CAS No.:	33069-62-4
Formula:	C ₄₇ H ₅₁ NO ₁₄
M.Wt:	853.91
Synonyms:	Taxol
Target:	Cell Cycle/Checkpoint
Pathway:	Microtubule/Tubulin
Storage:	Store at -20°C



Solvent & Solubility

≥85.6 mg/mL in DMSO; insoluble in H₂O; ≥31.6 mg/mL in EtOH with ultrasonic

In Vitro	Preparing Stock Solutions	Mass			
		Solvent Concentration	1mg	5mg	10mg
		1 mM	1.1711 mL	5.8554 mL	11.7108 mL
		5 mM	0.2342 mL	1.1711 mL	2.3422 mL
		10 mM	0.1171 mL	0.5855 mL	1.1711 mL

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

Biological Activity

Shortsummary	Antineoplastic agent			
IC ₅₀ & Target	0.1 pM (Microtubule (human endothelial cells))			
In Vitro	Cell Viability Assay			
	<table border="1"> <tr> <td>Cell Line:</td> <td>Human arterial endothelial (haEC) cells</td> </tr> <tr> <td>Preparation method:</td> <td>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.</td> </tr> </table>	Cell Line:	Human arterial endothelial (haEC) cells	Preparation method:
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	Reacting conditions:	1 μ M, 24 hours
	Applications:	Nonstop and single-dose (24-hour) applications were performed and cell proliferation was determined after 6 days by use of cell counting, BrdU-ELISA and MTT tests. A dose-dependent, significant growth inhibition occurred at high concentrations (0.01 to 1.0 μ mol/L), whereas lower paclitaxel doses (0.1 to 1.0 nmol/L) did not inhibit haEC growth significantly. Furthermore, no unspecific cytotoxic effects were observed within this concentration range.
In Vivo	Animal experiment	
	Animal models:	Female CB17 SCID mice
	Dosage form:	Intravenous injection, 12.5 mg per kg body weight
	Applications:	In mice treated with paclitaxel, the interface between tumor and dermal graft was ill defined, and small groups of tumor cells were seen within the human dermis and were surrounded by dilated vessels. Quantification of vessel cross-sections confirmed the histologic impression: numbers of vessels per high power field were significantly less in LP-treated mice compared with paclitaxel- and liposome-treated mice, respectively.
	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

1. Chung HK, Zou X, et al.

"A compact synthetic pathway rewires cancer signaling to therapeutic effector release. Science." 2019 May 3;364(6439).PMID:31048459

2. Zhang Y, Xia F, et al. "miR-135b-5p enhances doxorubicin-sensitivity of breast cancer cells through targeting anterior gradient 2." J Exp Clin Cancer Res. 2019 Jan 21;38(1):26.PMID:30665445

3. Deng Y, Li F, et al. "Triptolide sensitizes breast cancer cells to Doxorubicin through the DNA damage response inhibition." Mol Carcinog. 2018 Jun;57(6):807-814.PMID:29500880

4. Zina Hamoudi , Thang Manh Khuong, et al. "A fruit fly model for studying paclitaxel-induced pain [version 1;referees: awaiting peer review]" F1000Research 23 Jan 2018, 7:99.

5. Yu Wang, Zhenxin Zhu, et al. "The effect of phenotypic conditioned medium on the proliferation of BGC823 in human gastric cancer cell line." Academic Journal of Second Military Medical University,Dec.2017,Vol.38,No.12.

See more customer validations on www.apexbt.com.

References

[1] Axel D I, Kunert W, Göggelmann C, et al. Paclitaxel inhibits arterial smooth muscle cell proliferation and migration in vitro and in vivo using local drug delivery. Circulation, 1997, 96(2): 636-645.

[2] Kunstfeld R, Wickenhauser G, Michaelis U, et al. Paclitaxel encapsulated in cationic liposomes diminishes tumor angiogenesis and melanoma growth in a "humanized" SCID mouse model. Journal of investigative dermatology, 2003, 120(3): 476-482.

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 APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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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