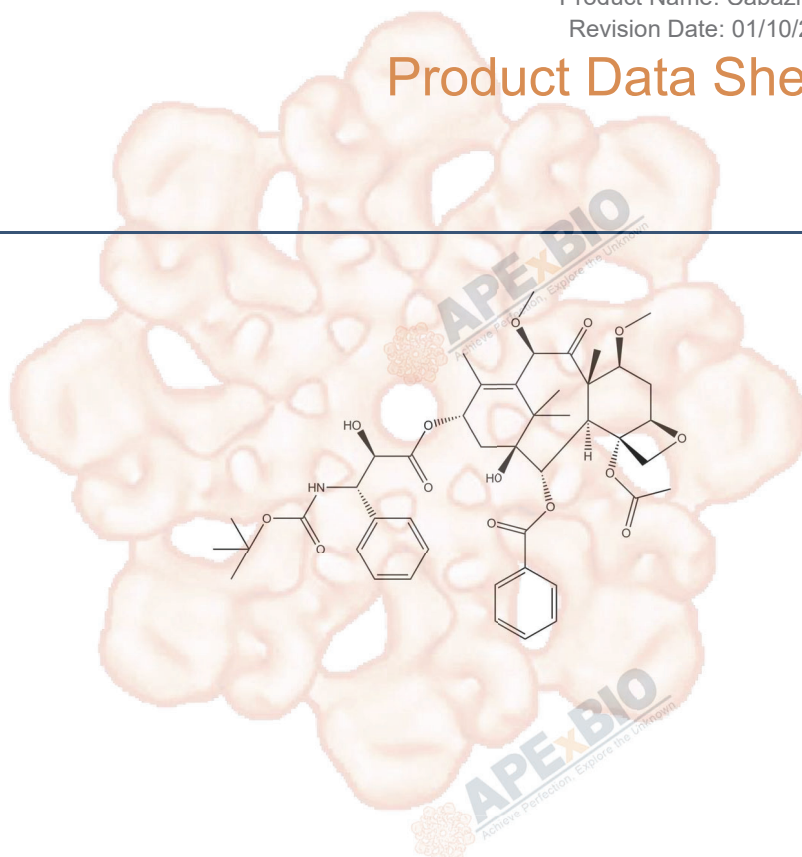


Product Data Sheet

Cabazitaxel

Cat. No.:	B2157
CAS No.:	183133-96-2
Formula:	C ₄₅ H ₅₇ NO ₁₄
M.Wt:	835.93
Synonyms:	
Target:	Cell Cycle/Checkpoint
Pathway:	Microtubule/Tubulin
Storage:	Store at -20°C



Solvent & Solubility

≥ 22.3mg/mL in DMSO

In Vitro

Preparing Stock Solutions	Mass		1mg	5mg	10mg
	Solvent	Concentration			
	1 mM		1.1963 mL	5.9814 mL	11.9627 mL
	5 mM		0.2393 mL	1.1963 mL	2.3925 mL
	10 mM		0.1196 mL	0.5981 mL	1.1963 mL

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

Biological Activity

Shortsummary

Microtubule associated inhibitor

IC₅₀ & Target

In Vitro

Cell Viability Assay

Cell Line:	P-glycoprotein-expressing cell lines with chemotherapy resistance
Preparation method:	The solubility of this compound in DMSO is > 22.3 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:	96 hrs
Applications:	Cabazitaxel showed antiproliferative activity by decreasing the lag time of

tubulin assembly and the rate of cold-induced microtubule depolymerization. In P-glycoprotein-expressing cell lines with resistance to taxanes (P388/TXT, Calc18/TXT and HL60/TAX) or to other chemotherapy agents (P388/DOX, P388/VCR and KBV1), Cabazitaxel was more effective than Docetaxel (IC50 ranges: Cabazitaxel, 0.013 ~ 0.414 mM; Docetaxel, 0.17 ~ 4.01 mM). Cabazitaxel showed relatively lower resistance factors (2 ~ 10) than those of Docetaxel (5 ~ 59).

Animal experiment

Animal models:	Mice bearing Docetaxel-sensitive MA16/C adenocarcinomas
Dosage form:	64.5, 40, 24.8 or 15.4 mg/kg; i.v.
Applications:	In mice bearing Docetaxel-sensitive MA16/C adenocarcinomas, Cabazitaxel showed significant anti-tumor activity, inducing CRs in 80% of mice and displaying a log cell kill of 3.7 at the HNTD of 40 mg/kg. The maximum drug concentration in tumors was reached 15 mins after dosing. At 48 hrs after dosing, the concentration of Cabazitaxel in tumors was 40-fold higher than that in plasma.
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.

In Vivo

Product Citations

1. Su F, Ahn S, et al. "Adipose stromal cell targeting suppresses prostate cancer epithelial-mesenchymal transition and chemoresistance." *Oncogene*. 2018 Oct 25. PMID:30361686
2. Blanchette AD, Grimm FA, et al. "Thorough QT/QTc in a Dish: An In Vitro Human Model That Accurately Predicts Clinical Concentration-QTc Relationships." *Clin Pharmacol Ther*. 2018 Oct 22. PMID:30346629
3. Oblad RV, Doughty H, et al. "Application of Mixture Design Response Surface Methodology for Combination Chemotherapy in PC-3 Human Prostate Cancer Cells." *Mol Pharmacol*. 2018 Jun 8. pii: mol.117.111450. PMID:29884690

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References

- [1]. Vrignaud P, Sémond D, Lejeune P, Bouchard H, Calvet L, Combeau C, Riou JF, Commeron A, Lavelle F, Bissery MC. Preclinical antitumor activity of cabazitaxel, a semisynthetic taxane active in taxane-resistant tumors. *Clin Cancer Res*. 2013 Jun 1;19(11):2973-83.

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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