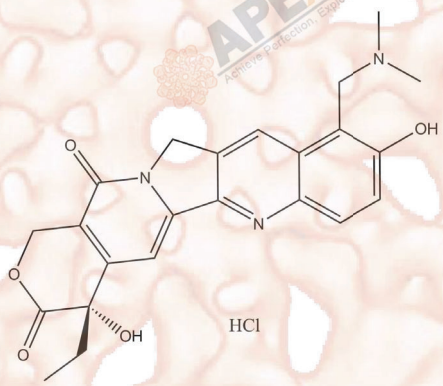
Product Data Sheet

Topotecan HCl

Cat. No.: B2296
CAS No.: 119413-54-6
Formula: C23H24ClN3O5
M.Wt: 457.91
Synonyms:
Target: DNA Damage/DNA Repair
Pathway: Topoisomerase
Storage: Store at -20°C



Solvent & Solubility

In Vitro

≥22.9mg/mL in DMSO

Preparing Stock Solutions

Concentration \ Mass / Solvent	1mg	5mg	10mg
1 mM	2.1838 mL	10.9192 mL	21.8384 mL
5 mM	0.4368 mL	2.1838 mL	4.3677 mL
10 mM	0.2184 mL	1.0919 mL	2.1838 mL

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

Biological Activity

Shortsummary	Topoisomerase 1 inhibitor
IC_{50} & Target	

In Vitro

Cell Viability Assay

Cell Line:	MCF-7 breast cancer cell line, human prostate cancer cell lines (PC-3 and LNCaP)
Preparation method:	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.
	Reacting conditions:	500 nM for 6-12 days; or 2, 10 nM for 72 h
	Applications:	Topotecan-treated cells showed an impaired sphere-forming capacity in vitro. Topotecan-induced ABCG2 expression in MCF-7 cells was associated with decreased CD24/EpCAM expression [1]. Moreover, Topotecan treatment concentration-dependently increased the cytotoxicity in PC-3 and LNCaP cells [2].
In Vivo	**Animal experiment**	
	Animal models:	Newborn NOD.Cg-Prkdcscid Il2rgtm1Wjl/SzJ (NSG) mice or adult NMRI-nu/nu mice model; PC-3 xenograft model
	Dosage form:	2.45 and 0.10 mg/kg/day; intra-tumor injections, continuous infusion or conventional I.V., for 30 days;
	Applications:	Topotecan-treated cells decreased tumorigenicity in immunodeficient mice [1]. Moreover, low-dose continuous administration of topotecan enhanced antitumor activity in prostate cancer [2].
	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

See more customer validations on www.apexbt.com.

References

1. Huber, S., Wege, A. K., Bernhardt, G., Buschauer, A. and Brockhoff, G. (2015) Topotecan-induced ABCG2 expression in MCF-7 cells is associated with decreased CD24 and EpCAM expression and a loss of tumorigenicity. Cytometry A. 87, 707-716
2. Aljuffali, I. A., Mock, J. N., Costyn, L. J., Nguyen, H., Nagy, T., Cummings, B. S. and Arnold, R. D. (2011) Enhanced antitumor activity of low-dose continuous administration schedules of topotecan in prostate cancer. Cancer Biol Ther. 12, 407-420

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. 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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