

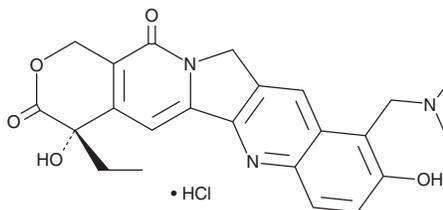
PRODUCT INFORMATION



Topotecan (hydrochloride)

Item No. 14129

CAS Registry No.: 119413-54-6
Formal Name: 10-[(dimethylamino)methyl]-4S-ethyl-4,9-dihydroxy-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione, monohydrochloride
Synonyms: NSC 609669, SKF 104864A
MF: C₂₃H₂₃N₃O₅ • HCl
FW: 457.9
Purity: ≥98%
UV/Vis.: λ_{max}: 224, 267, 318, 333, 384 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



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

Laboratory Procedures

Topotecan (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the topotecan (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Topotecan (hydrochloride) is soluble in DMSO at a concentration of approximately 10 mg/ml.

Topotecan (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, topotecan (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Topotecan (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Topotecan is an inhibitor of DNA topoisomerase I and a derivative of the DNA topoisomerase I inhibitor camptothecin (Item No. 11694).¹⁻³ Topotecan inhibits DNA topoisomerase I in human MCF-7 breast and DU-145 prostate cancer cells with IC₅₀ values of 13 and 2 nM, respectively, in a cell-based luciferase reporter assay.⁴ Topotecan induces cytotoxicity and DNA damage in HT-29 human colon adenocarcinoma cells with (IC₅₀s = 33 and 280 nM, respectively).¹ Formulations containing topotecan have been used in the treatment of small-cell lung cancer.

References

1. Rothenberg, M.L. Topoisomerase I inhibitors: Review and update. *Ann. Oncol.* **8(9)**, 837-855 (1997).
2. Dancey, J. and Eisenhauer, E.A. Current perspectives on camptothecins in cancer treatment. *Br. J. Cancer* **74(3)**, 327-338 (1996).
3. Schellens, J.H.M., Creemers, G.J., Beijnen, J.H., *et al.* Bioavailability and pharmacokinetics of oral topotecan: A new topoisomerase I inhibitor. *Br. J. Cancer* **73(10)**, 1268-1271 (1996).
4. Caceres, G., Zankina, R., Zhu, X., *et al.* Determination of chemotherapeutic activity *in vivo* by luminescent imaging of luciferase-transfected human tumors. *Anticancer Drugs* **14(7)**, 569-574 (2003).

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

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