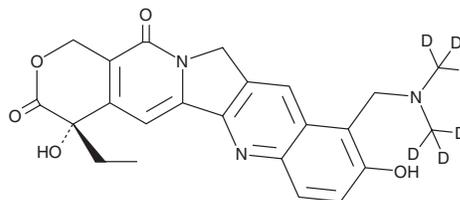


PRODUCT INFORMATION



Topotecan-d₆ Item No. 29082

CAS Registry No.: 1044904-10-0
Formal Name: (4S)-10-[[di(methyl-d₃)amino]methyl]-4-ethyl-4,9-dihydroxy-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione
MF: C₂₃H₁₇D₆N₃O₅
FW: 427.5
Chemical Purity: ≥90% (Topotecan)
Deuterium Incorporation: ≥99% deuterated forms (d₁-d₆); ≤1% d₀
Supplied as: A 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-d₆ is intended for use as an internal standard for the quantification of topotecan (Item No. 14129) by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

Topotecan-d₆ is supplied as a solid. A stock solution may be made by dissolving the topotecan-d₆ in the solvent of choice, which should be purged with an inert gas. Topotecan-d₆ is soluble in the organic solvent methanol. Topotecan-d₆ is also slightly soluble in DMSO.

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 DU145 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 (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., 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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