

PRODUCT INFORMATION



Etoposide-d₃ Item No. 26488

Formal Name: (5R,5aR,8aR,9S)-9-[[4,6-O-(1R)-ethylidene-β-D-glucopyranosyl]oxy]-5,8,8a,9-tetrahydro-5-(4-hydroxy-3-methoxy-5-(methoxy-d₃)phenyl)-furo[3',4':6,7]naphtho[2,3-d]-1,3-dioxol-6(5aH)-one

Synonyms: EPE-d₃, VP-16-123-d₃

MF: C₂₉H₂₉D₃O₁₃

FW: 591.6

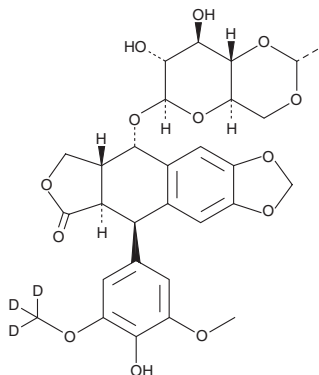
Chemical Purity: ≥98% (Etoposide)

Deuterium Incorporation: ≥99% deuterated forms (d₁-d₃); ≤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

Etoposide-d₃ is intended for use as an internal standard for the quantification of etoposide (Item No. 12092) 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).

Etoposide-d₃ is supplied as a solid. A stock solution may be made by dissolving the etoposide-d₃ in the solvent of choice, which should be purged with an inert gas. Etoposide-d₃ is soluble in the organic solvent methanol.

Description

Etoposide is a plant alkaloid and an inhibitor of topoisomerase II (IC₅₀ = 60.3 μM).^{1,2} It inhibits proliferation of a variety of adenocarcinoma cells (IC₅₀s = 0.005-12,200 μM) and human umbilical vein endothelial (HUVEC) cells (IC₅₀ = 0.249 μM).³ It reduces tumor growth in an Ma human embryonal carcinoma mouse xenograft model when administered at a dose of 25 mg/kg, an effect that is enhanced by concomitant administration of the immunosuppressant cyclosporin A (Item No. 12088).⁴ Etoposide also inhibits nuclear receptor coactivator 3 (IC₅₀ = 2.48 μM).⁵ Formulations containing etoposide have been used in combination therapy in the treatment of cancer.

References

1. Chen, G.L., Yang, L., Rowe, T.C., *et al.* *J. Biol. Chem.* **259**(21), 13560-13566 (1984).
2. Wu, W.B., Ou, J.B., Huang, Z.H., *et al.* *Eur. J. Med. Chem.* **46**(8), 3339-3347 (2011).
3. Drevs, J., Fakler, J., Eisele, S., *et al.* *Anticancer Res.* **24**(3a), 1759-1764 (2004).
4. Osieka, R., Seeber, S., Pannenbäcker, R., *et al.* *Cancer Chemother. Pharmacol.* **18**(3), 198-202 (1986).
5. O'Malley, B. "Luminescence-based cell-based high throughput dose response assay for inhibitors of the Steroid Receptor Coactivator 3 (SRC;NCOA3)." National Center for Biotechnology Information. PubChem Compound Database. Accessed January 21, 2019. <https://pubchem.ncbi.nlm.nih.gov/bioassay/602166#section=Entrez-Crosslinks>.

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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