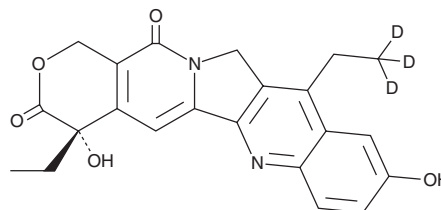


# PRODUCT INFORMATION



**SN-38-d<sub>3</sub>**  
Item No. 40133

**CAS Registry No.:** 718612-49-8  
**Formal Name:** 4-ethyl-11-(ethyl-2,2,2-d<sub>3</sub>)-4,9-dihydroxy-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione  
**Synonyms:** 7-Ethyl-10-Hydroxycamptothecin-d<sub>3</sub>, 7-ethyl-10-hydroxy-20(S)-Camptothecin-d<sub>3</sub>  
**MF:** C<sub>22</sub>H<sub>17</sub>D<sub>3</sub>N<sub>2</sub>O<sub>5</sub>  
**FW:** 395.4  
**Chemical Purity:** ≥95% (SN-38)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**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

SN-38-d<sub>3</sub> is intended for use as an internal standard for the quantification of SN-38 (Item No. 15632) 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).

SN-38-d<sub>3</sub> is supplied as a solid. A stock solution may be made by dissolving the SN-38-d<sub>3</sub> in the solvent of choice, which should be purged with an inert gas. SN-38-d<sub>3</sub> is slightly soluble in DMSO and methanol.

## Description

SN-38 is an inhibitor of topoisomerase I and an active metabolite of the prodrug irinotecan (Item No. 14180).<sup>1,2</sup> It is formed from irinotecan by carboxylesterases.<sup>1</sup> SN-38 (0.1, 1, and 10 μM) induces topoisomerase I-dependent DNA cleavage in a cell-free assay.<sup>2</sup> It induces DNA single-strand breaks in HT-29 colorectal adenocarcinoma cells when used at a concentration of 200 nM and cytotoxicity in HT-29 cells (IC<sub>50</sub> = 8.8 nM). SN-38 (100 mg/kg per day) reduces tumor volume without affecting body weight in an MX-1 breast cancer mouse xenograft model.<sup>3</sup>

## References

1. Ma, M.K. and McLeod, H.L. Lessons learned from the irinotecan metabolic pathway. *Curr. Med. Chem.* **10**(1), 41-49 (2003).
2. Tanizawa, A., Fujimori, A., Fujimori, Y., et al. Comparison of topoisomerase I inhibition, DNA damage, and cytotoxicity of camptothecin derivatives presently in clinical trials. *J. Natl. Cancer Inst.* **86**(11), 836-842 (1994).
3. Kawato, Y., Furuta, T., Aonuma, M., et al. Antitumor activity of a camptothecin derivative, CPT-11, against human tumor xenografts in nude mice. *Cancer Chemother. Pharmacol.* **28**(3), 192-198 (1991).

### 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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