

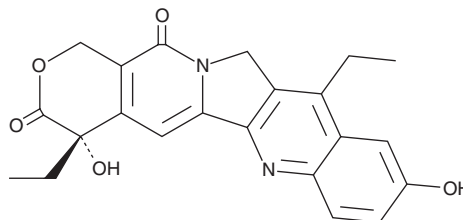
# PRODUCT INFORMATION



## SN-38

Item No. 15632

**CAS Registry No.:** 86639-52-3  
**Formal Name:** (4S)-4,11-diethyl-4,9-dihydroxy-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione  
**Synonyms:** 7-ethyl-10-hydroxy-20(S)-Camptothecin, 7-ethyl-10-Hydroxycamptothecin, NK 012  
**MF:** C<sub>22</sub>H<sub>20</sub>N<sub>2</sub>O<sub>5</sub>  
**FW:** 392.4  
**Purity:** ≥98%  
**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

SN-38 is supplied as a crystalline solid. A stock solution may be made by dissolving the SN-38 in the solvent of choice, which should be purged with an inert gas. SN-38 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of SN-38 in these solvents is approximately 2 and 0.1 mg/ml, respectively.

SN-38 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, SN-38 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. SN-38 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### 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.

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