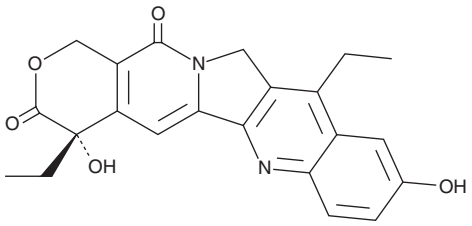
PRODUCT INFORMATION

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:	$C_{22}H_{20}N_2O_5$
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).[1,2] It is formed from irinotecan by carboxylesterases.[1] SN-38 (0.1, 1, and 10 µM) induces topoisomerase I-dependent DNA cleavage in a cell-free assay.[2] 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_{50} = 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.[3]

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).

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