

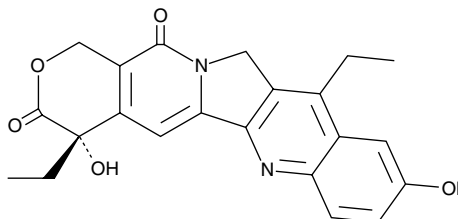
Product Information



SN 38

Item No. 15632

CAS Registry No.: 86639-52-3
Formal Name: 4,11-diethyl-4,9-dihydroxy-(4S)-1H-pyrano[3',4':6,7]indolizino[1,2-b]quinoline-3,14(4H,12H)-dione
Synonyms: 7-Ethyl-10-Hydroxycamptothecin, 7-ethyl-10-hydroxy-20(S)-Camptothecin, NK 012
MF: C₂₂H₂₀N₂O₅
FW: 392.4
Purity: ≥98%
Stability: ≥2 years at -20°C
Supplied as: A crystalline solid
UV/Vis.: λ_{max}: 224, 267, 331, 368, 383 nm



Laboratory Procedures

For long term storage, we suggest that SN 38 be stored as supplied at -20°C. It should be stable for at least two years.

SN 38 is supplied as a crystalline solid. A stock solution may be made by dissolving the SN 38 in the solvent of choice. SN 38 is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. 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 0.30 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.

SN 38 is the active metabolite of irinotecan (Item No. 14180), a derivative of the alkaloid camptothecin (Item No. 11694), and acts as a potent inhibitor of DNA topoisomerase I.^{1,2} It is formed by the hydrolysis of irinotecan by carboxylesterases and metabolized through glucuronidation by UDP glucuronosyl transferase 1A1.^{3,4} SN 38 is a more potent topoisomerase I inhibitor and more cytotoxic to HT-29 colon cancer cells (IC₅₀ = 8.8 nM) compared to irinotecan (IC₅₀ > 100 nM).^{1,2}

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**, 327-338 (1996).
3. Mathijssen, R.H.J., van Alphen, R.J., Verweij, J., *et al.* Clinical pharmacokinetics and metabolism of irinotecan (CPT-11). *Clin. Cancer Res.* **7**, 2182-2194 (2001).
4. Ma, M.K. and McLeod, H.L. Lessons learned from the irinotecan metabolic pathway. *Curr. Med. Chem.* **10(1)**, 41-49 (2003).

Related Products

For a list of related products please visit: www.caymanchem.com/catalog/15632

WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. 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

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery**.

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

This limitation of liability does not apply in the case of intentional acts or negligence of Cayman, its directors or its employees.

Buyer's **exclusive remedy** and Cayman's sole liability hereunder shall be limited to a **refund** of the purchase price, or at Cayman's option, the **replacement**, at no cost to Buyer, of all material that does not meet our specifications.

Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

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Cayman Chemical

Mailing address

1180 E. Ellsworth Road
Ann Arbor, MI
48108 USA

Phone

(800) 364-9897
(734) 971-3335

Fax

(734) 971-3640

E-Mail

custserv@caymanchem.com

Web

www.caymanchem.com