

Certificate of Analysis

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Product Name: SN 38

Catalog No.: 2684

Batch No.: 2

CAS Number: 86639-52-3

IUPAC Name: (4*S*)-4,11-Diethyl-4,9-dihydroxy-1*H*-pyrano[3',4':6,7]indolizino[1,2-*b*]quinoline-3,14(4*H*,12*H*)dione

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: C₂₂H₂₀N₂O₅·H₂O

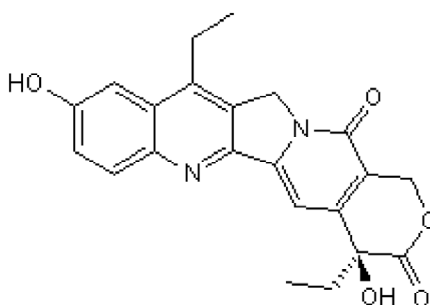
Batch Molecular Weight: 410.42

Physical Appearance: Yellow solid

Solubility: DMSO to 50 mM

Storage: Store at +4°C

Batch Molecular Structure:



2. ANALYTICAL DATA

HPLC: Shows 98.4% purity

¹H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Optical Rotation: [α]_D = -19.2 (Concentration = 0.8, Solvent = DMSO)

Microanalysis:

Carbon Hydrogen Nitrogen

Theoretical 64.38 5.4 6.83

Found 64.46 5.43 6.78

Caution - Not Fully Tested • Research Use Only • Not For Human or Veterinary Use

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Description:

SN 38 is an active metabolite of CPT-11 (Cat. No. 2688) that inhibits DNA topoisomerase I (IC₅₀ values are 0.74 and 1.9 μM in P388 and Ehrlich cells respectively). Inhibits DNA and RNA synthesis (IC₅₀ values are 0.077 and 1.3 μM respectively) but does not affect protein synthesis. Displays potent antitumor activity against a range of human tumor cell lines (IC₅₀ values are 3.3, 13, 19 and 22 nM for HCT-116, BEL-7402, HL60 and HELA cells respectively).

Physical and Chemical Properties:

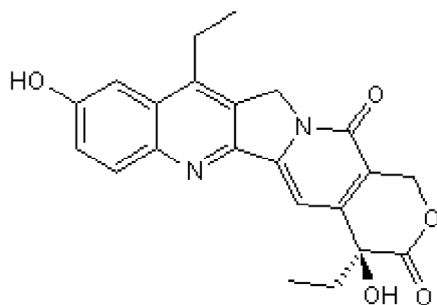
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Batch Molecular Weight: 410.42

Physical Appearance: Yellow solid

Minimum Purity: ≥98%

Batch Molecular Structure:



Storage: Store at +4°C

Solubility & Usage Info:

DMSO to 50 mM

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. *Unless contradicted by product-specific protocols or instructions, our standard recommendations apply:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Koizumi *et al* (2006) Novel SN-38-incorporating polymeric micelles, NK012, eradicate vascular endothelial growth factor-Secr.g bulky tumors. *Cancer Res.* **66** 10048. PMID: 17047068.

Gao *et al* (2005) Synthesis and antitumor activity of the hexacyclic camptothecin derivatives. *Bioorg.Med.Chem.Lett.* **15** 3233. PMID: 15913996.

Kawato *et al* (1991) Intracellular roles of SN-38, a metabolite of the camptothecin derivative CPT-11, in the antitumor effect of CPT-11. *Cancer Res.* **51** 4187. PMID: 1651156.

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