

# Certificate of Analysis

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**Product Name:** SN 38

**Catalog No.:** 2684

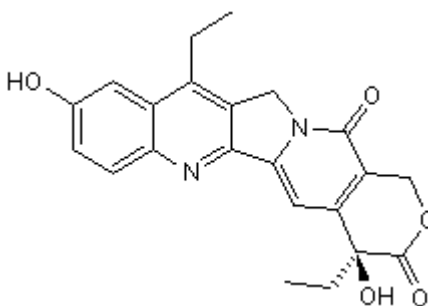
**Batch No.:** 2

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:** C<sub>22</sub>H<sub>20</sub>N<sub>2</sub>O<sub>5</sub>·H<sub>2</sub>O  
**Batch Molecular Weight:** 410.42  
**Physical Appearance:** Yellow solid  
**Solubility:** DMSO to 100 mM  
**Storage:** Store at +4°C  
**Batch Molecular Structure:**



## 2. ANALYTICAL DATA

**HPLC:** Shows 99.0% purity  
**<sup>1</sup>H NMR:** Consistent with structure  
**Mass Spectrum:** Consistent with structure  
**Optical Rotation:** [α]<sub>D</sub> = -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:**

Active metabolite of CPT-11 (Cat. No. 2688) that inhibits DNA topoisomerase I (IC<sub>50</sub> values are 0.74 and 1.9 μM in P388 and Ehrlich cells respectively). Inhibits DNA and RNA synthesis (IC<sub>50</sub> 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 (IC<sub>50</sub> values are 3.3, 13, 19 and 22 nM for HCT-116, BEL-7402, HL60 and HELA cells respectively).

**Physical and Chemical Properties:**

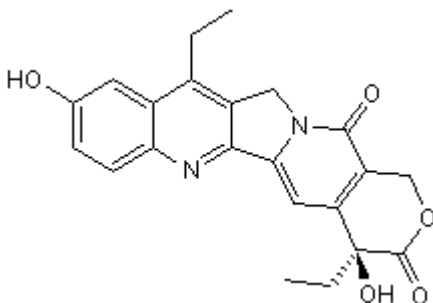
Batch Molecular Formula: C<sub>22</sub>H<sub>20</sub>N<sub>2</sub>O<sub>5</sub>.H<sub>2</sub>O

Batch Molecular Weight: 410.42

Physical Appearance: Yellow solid

**Minimum Purity:** >98%

**Batch Molecular Structure:**



**References:**

**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.

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

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

**Storage:** Store at +4°C

**Solubility & Usage Info:**

DMSO to 100 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. Our standard recommendations are:

**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.

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