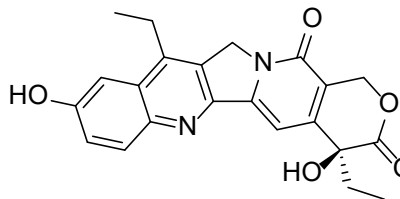


SN38 Control Set for *in Vitro* Studies

Product Number: **CM11034.1**

Contents: 6 tubes, each with 100 µL of 10 µM SN38 solution in DMSO.



Product Description

CellMosaic's SN38 Control Set is a ready-to-use solution for *in vitro* research, formulated to simplify your workflow and minimize handling risks of this potent cytotoxic agent. SN38 (7-ethyl-10-hydroxycamptothecin) is a metabolite of irinotecan, a highly potent cytotoxic compound that inhibits DNA topoisomerase 1, leading to apoptosis. This control set contains 6 tubes of a 10 µM SN38 solution in DMSO, a concentration suitable for most biological research and cell-based assays.

The 10 µM concentration is intentionally set within a safe, research-appropriate range for analytical studies, both quantitative and qualitative. Each tube is intended for a single experiment, enabling straightforward dilution (see **Table 1** for suggested dilutions). The SN38 solution is pre-formulated and stable at room temperature, requiring no preparation before use or dilution.

Drug Information

- **Name:** SN38 (7-ethyl-10-hydroxycamptothecin)
- **CAS Number:** 86639-52-3
- **Molecular Weight:** 392.42 Da
- **Chemical Formula:** C₂₂H₂₀N₂O₅
- **Mechanism of Action:** Inhibition of topoisomerase I leads to inhibition of both DNA replication and transcription
- **Reported Activities:** Anti-neoplastic

Key Features

- Pre-formulated **10 µM stock in DMSO** —no preparation needed.
- Convenient format: 6 single-use tubes for consistent results.
- Ideal for:
 - Drug screening
 - Cell-viability, proliferation and cytotoxicity assays
 - Other qualitative and quantitative studies
- Sufficient volume for replicates.

Storage & Stability

- Once diluted: stable at room temperature for short-term use.
- Long-term storage: Store at -20 °C or below.

Procedure

1. Remove one tube from the set and allow it to warm to ambient temperature.
2. Briefly centrifuge to ensure all liquid is at the bottom of the tube.
3. Use directly or dilute to the desired concentration.

Serial Dilution Guidelines

To prepare concentrations from 1 μ M to 10 pM:

- Use clean and labeled vials to avoid cross-contamination.
- Dilute the SN38 stock using an appropriate solvent or buffer (e.g., PBS buffer or water)
- Approximate total diluent volume needed: 6 mL.

Table 1: An Example of Serial Dilution Plan for SN38 Control Set



Step	SN38 Concentration	Volume to Transfer (μ L)	Diluent Volume (μ L)	Total Volume (μ L)	Sample Volume for Assay (μ L)
Stock	10 μ M	–	–	100	–
1	1 μ M	100	900	1000	600
2	500 nM	400	400	800	600
3	100 nM	200	800	1000	600
4	10 nM	100	900	1000	600
5	5 nM	400	400	800	600
6	1 nM	200	800	1000	600
7	100 pM	100	900	1000	600
8	50 pM	400	400	800	600
9	10 pM	200	800	1000	800

Note: Handle SN38-containing solutions with appropriate safety precautions, including PPE and fume hood use. Dispose of waste according to institutional hazardous waste guidelines.

Important Notes & Contact Information

READ BEFORE USING ANY RESOURCES PROVIDED HEREIN

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Sample data are provided for illustrative and example purposes only and represent a small dataset used to verify kit performance in the CellMosaic laboratory. Information about the chemicals and reagents used in the kit are provided as necessary.

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