Web: www.taiclone.com
Tel: +886-2-2735-9682
Email: order@taiclone.com

Topotecan (Hydrochloride)

Catalog No: tcsc1498

Available Sizes

Size: 10mg

Size: 50mg

Size: 100mg

Specifications

CAS No:
119413-54-6

Formula:
$C_{23}H_{24}ClN_3O_5$

Pathway:
Cell Cycle/DNA Damage;Autophagy

Target:
Topoisomerase;Autophagy

Purity / Grade:
>98%

Solubility:
DMSO : 15.3 mg/mL (33.41 mM; Need ultrasonic and warming)

Alternative Names:
SKF 104864A;NSC 609669

Observed Molecular Weight:
457.91

Product Description

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Topotecan Hydrochloride (SKF 104864A; NSC 609669) is a **Topoisomerase I** inhibitor with potent antineoplastic activities.

IC50 & Target: Topoisomerase I[1]

In Vitro: Topotecan (SKF 104864A) obviously inhibits proliferation of not only human glioma cells but also glioma stem cells (GSCs) in a dose- and time-dependent manner. According to the IC_{50} values at 24 h, 3 μM of Topotecan (SKF 104864A) is selected as the optimal administration concentration. In addition, Topotecan (SKF 104864A) induces cell cycle arrest in G0/G1 and S phases and promoted apoptosis. Results show that the cell viability is inhibited by Topotecan (SKF 104864A) in a dose-dependent manner. 2, 20 and 40 μM of Topotecan (SKF 104864A) obviously inhibits the cell viability compared with the control groups. The IC_{50} values of Topotecan (SKF 104864A) at 24 h are 2.73±0.25 μM of U251 cells, 2.95±0.23 μM of U87 cells, 5.46±0.41 μM of GSCs-U251 and 5.95±0.24 μM of GSCs-U87. Thus 3 μM of Topotecan (SKF 104864A) is selected as the optimal administration concentration in the subsequent experiments[1].

In Vivo: NUB-7 metastatic model, the animals belonging to all the 4 groups are sacrificed after 14 days treatment. Compared with the control, Low dose metronomic (LDM) Topotecan (SKF 104864A) and TP+Pazopanib (PZ) liver weights are significantly lower in TP+PZ-treated animals, compared with PZ. Microscopic tumors are visible in the livers of mice belonging to all the groups except TP+PZ confirming the ability of Topotecan (SKF 104864A)+PZ to control liver metastasis. In a previous dose-response study, the daily dose of oral metronomic Topotecan (SKF 104864A) (0.5, 1.0, and 1.5 mg/kg) causes greater reduction in microvascular density compared with weekly maximum-tolerated dose regimen (7.5 and 15 mg/kg) in an ovarian cancer model, but the mice treated with 1.5 mg/kg daily, oral Topotecan (SKF 104864A) show decreased food intake, and a lesser antitumor effect[2].