

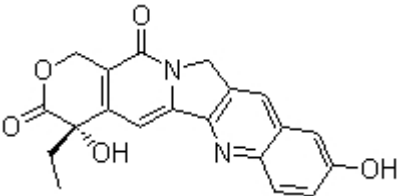


Product Introduction

(S)-10-Hydroxycamptothecin

10-Hydroxycamptothecin is a DNA topoisomerase I inhibitor with potent anti-tumor activity.

Technical Data:

| | | |
|-------------------------------|---|--|
| Molecular Weight (MW): | 365.35 |  |
| Formula: | C ₂₀ H ₁₆ N ₂ O ₅ | |
| Purity: | >98% | |
| Storage: | 3 years -20°C Powder | |
| | 6 months-80°C in DMSO | |
| CAS No.: | 19685-09-7 | |

Biological Activity

10-Hydroxycamptothecin inhibits the growth of BT-20 and MDA-231 cell with IC₅₀ of 34.3 nM and 7.27 nM, respectively, more potently than camptothecin (CPT) with IC₅₀ of >500 nM. 10-Hydroxycamptothecin potently induces human topoisomerase I-mediated cleavable complex formation of pBR322 plasmid DNA with EC₅₀ of 0.35 μM, displaying >50-fold potency than CPT with EC₅₀ of 18.85 μM. [2] 10-Hydroxycamptothecin treatment induces dose-dependent growth inhibition of human microvascular endothelial cells (HMEC) with IC₅₀ of 0.31 μM, and significantly inhibits the migration of HMEC with IC₅₀ of 0.63 μM. Treatment of HMEC cells with 10-Hydroxycamptothecin also results in a dose-dependent inhibition of tube formation with IC₅₀ of 0.96 μM. [3] 10-Hydroxycamptothecin (5-20 nM) significantly inhibits the proliferation of Colo 205 cells, arrests the cells in the G₂ phase of the cell cycle and induces apoptosis through a caspase-3-dependent pathway. [4]

10-Hydroxycamptothecin treatment inhibits angiogenesis in a concentration-dependent fashion in the CAM model, with 95% inhibition at dose of 25 nM, more potently than suramin which at 125 nM inhibits angiogenesis only by 60%. [3] Oral administration of 10-Hydroxycamptothecin at low doses of 2.5-7.5 mg/kg every 2 days leads to significant growth inhibition of Colo 205 xenografts in mice without acute toxicity. [4] LD₅₀: Mice 104mg/kg (i.p.). [5]

Note: Products protected by valid patents are not offered for sale in countries where the sale of such products constitutes a patent infringement and its liability is at buyer's risk. This item is only for R&D purpose not for commercial business in kilos. Buyers should overview the patent issue in their countries.

References

- [1] Ling YH, et al. *Cancer Biochem Biophys*, 1990, 11(1), 23-30.
- [2] Vladu B, et al. *Mol Pharmacol*, 2000, 57(2), 243-251.
- [3] Xiao D, et al. *Life Sci*, 2001, 69(14), 1619-1628.
- [4] Ping YH, et al. *Oncol Rep*, 2006, 15(5), 1273-1279.



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