Rubitecan

Cat. No.: HY-13744

CAS No.: 91421-42-0

Molecular Formula: $C_{20}H_{15}N_3O_6$

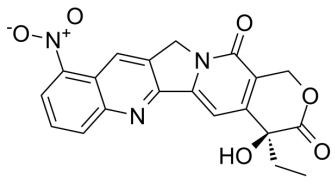
Molecular Weight: 393.35

Target: Topoisomerase

Pathway: Cell Cycle/DNA Damage

Storage:

Powder	-20°C	3 years
	4°C	2 years
In solvent	-80°C	2 years
	-20°C	1 year



SOLVENT & SOLUBILITY

In Vitro

DMSO : 62.5 mg/mL (158.89 mM; Need ultrasonic)

Preparing Stock Solutions	Solvent / Mass / Concentration	1 mg	5 mg	10 mg
	1 mM	2.5423 mL	12.7113 mL	25.4227 mL
	5 mM	0.5085 mL	2.5423 mL	5.0845 mL
	10 mM	0.2542 mL	1.2711 mL	2.5423 mL

Please refer to the solubility information to select the appropriate solvent.

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (5.29 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Rubitecan (RFS 2000), a Camptothecin derivative, is an orally active topoisomerase I inhibitor with broad antitumor activity, and induces protein-linked DNA single-strand breaks, thereby blocking DNA and RNA synthesis in dividing cells[1][2][3].

IC_{50} & Target

Topoisomerase I[1]

In Vitro

Rubitecan (RFS 2000) inhibits U-CH1, U-CH2, and CCL4 cells with IC_{50}s 0.32, 0.83, and 7.7 μM, respectively[4].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Burris HA 3rd, et al. Phase II trial of oral rubitecan in previously treated pancreatic cancer patients. Oncologist. 2005 Mar;10(3):183-90.

[2]. Rubitecan: 9-NC, 9-Nitro-20(S)-camptothecin, 9-nitro-camptothecin, 9-nitrocamptothecin, RFS 2000, RFS2000. Drugs R D. 2004;5(5):305-11.

[3]. Rubitecan

[4]. Xia M, et al. Identification of repurposed small molecule drugs for chordoma therapy. Cancer Biol Ther. 2013 Jul;14(7):638-47.

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