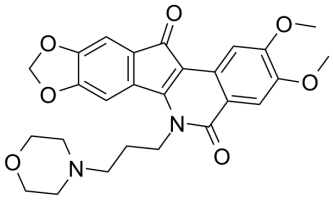
Indotecan

Cat. No.:	HY-18351
CAS No.:	915303-09-2
Molecular Formula:	$C_{26}H_{26}N_2O_7$
Molecular Weight:	478.49
Target:	Topoisomerase
Pathway:	Cell Cycle/DNA Damage
Storage:	4°C, stored under nitrogen * In solvent : -80°C, 6 months; -20°C, 1 month (stored under nitrogen)



SOLVENT & SOLUBILITY

In Vitro	DMSO : < 1 mg/mL (ultrasonic;warming;heat to 60°C) (insoluble or slightly soluble)

BIOLOGICAL ACTIVITY

Description	Indotecan (LMP-400), an indenoisoquinoline derivative, is a potent Topoisomerase I inhibitor, with IC_{50}s of 300, 1200, 560 nM for P388, HCT116, MCF-7 cell lines, respectively. Indotecan prevents the relaxation of supercoiled DNA and can be used for the research of visceral leishmaniasis[1][2].
IC_{50} & Target	Topoisomerase I
In Vitro	Indotecan (48 h) inhibits the proliferation of L. infantum promastigotes, ex vivo-infected splenocytes, and uninfected splenocytes, with IC_{50}s of 0.10 μM, 0.10 μM, and 57.16 μM, respectively[2]. Indotecan (1.1-90 μM; 30 min) induces TopI-DNA complexes and inhibits DNA synthesis in L. infantum cultures[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	Indotecan (2.5 mg/kg; i.p. every 2 d for 15 d) depletes the parasitic burden in the spleen and liver of visceral leishmaniasis mice[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Female BALB/c mice (4-6 weeks) were infected with metacyclic parasites intravenously through the tail vein[2]
Dosage:	2.5 mg/kg body weight per injection
Administration:	Intraperitoneally every 2 days for 15 days (total, eight doses)
Result:	A drastic reduction of the number of transforming amastigotes recovered from the target organs of drug-treated animals was observed.

REFERENCES

[1]. Balaña-Fouce R, et, al. Indotecan (LMP400) and AM13-55: two novel indenoisoquinolines show potential for treating visceral leishmaniasis. Antimicrob Agents Chemother. 2012 Oct;56(10):5264-70.

[2]. Seol Y, et, al. Single-Molecule Supercoil Relaxation Assay as a Screening Tool to Determine the Mechanism and Efficacy of Human Topoisomerase IB Inhibitors. Mol Cancer Ther. 2015 Nov;14(11):2552-9.

Caution: Product has not been fully validated for medical applications. For research use only.

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