LMP744 hydrochloride

Cat. No.: HY-U00248A

CAS No.: 308246-57-3

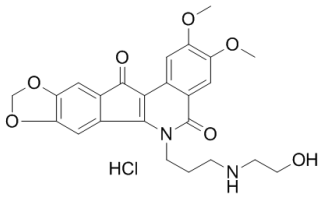
Molecular Formula: $C_{24}H_{25}ClN_2O_7$

Molecular Weight: 488.92

Target: Topoisomerase

Pathway: Cell Cycle/DNA Damage

Storage: Please store the product under the recommended conditions in the COA.



SOLVENT & SOLUBILITY

In Vitro

DMSO : 5.56 mg/mL (11.37 mM; Need ultrasonic)

Preparing Stock Solutions	Concentration / Solvent / Mass	1 mg	5 mg	10 mg
	1 mM	2.0453 mL	10.2266 mL	20.4532 mL
	5 mM	0.4091 mL	2.0453 mL	4.0906 mL
	10 mM	0.2045 mL	1.0227 mL	2.0453 mL

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

In Vivo

1. Add each solvent one by one: **10% DMSO >> 90% (20% SBE-β-CD in saline)**
   Solubility: ≥ 0.56 mg/mL (1.15 mM); Clear solution
2. Add each solvent one by one: **10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline**
   Solubility: ≥ 0.56 mg/mL (1.15 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

LMP744 hydrochloride (MJ-III65 hydrochloride) is a DNA intercalator and **Topoisomerase I (Top1)** inhibitor with antitumor activity[1].

IC_{50} & Target

Top1[1].

In Vitro

The GI_{50} value of LMP744 (MJ-III-65) for NCI60 cells is 0.1 μM[2].

LMP744 (0.1-5 μM, 3 days) induces dose-dependent accumulation of cells in the S and G_2 phases of the cell cycle[2].

Cell Cytotoxicity Assay[2]

Cell Line:	P388 and P388 Top1-deficient murine leukemia cells.

Concentration:	0.1-100 μM
Incubation Time:	3 days
Result:	Induced dose-dependent accumulation of cells in the S and G_2 phases of the cell cycle.

In Vivo

LMP744 (MJ-III-65) (10-50 mg/kg) administered i.v. push once a week for 4 weeks in nude mice moderately actives against human A253 and FaDu tumor xenografts without significant toxicity[1].

Animal Model:	Athymic nude mice (nu/nu, female, 20-25 g, 8-12 weeks old) transplanted with A253 and FaDu human head and neck xenografts[1].
Dosage:	10, 25, or 50 mg/kg/week, 4 weeks
Administration:	I.V. push via tail vein
Result:	Moderately actived against human A253 and FaDu tumor xenografts without significant toxicity.

REFERENCES

[1]. Antony S, et al. Cellular topoisomerase I inhibition and antiproliferative activity by MJ-III-65 (NSC 706744), an indenoisoquinoline topoisomerase I poison. Mol Pharmacol. 2005 Feb;67(2):523-30.

[2]. Antony S, et al. Bisindenoisoquinoline bis-1,3-{(5,6-dihydro-5,11-diketo-11H-indeno [1,2-c]isoquinoline)-6-propylamino}propane bis(trifluoroacetate) (NSC 727357), a DNA intercalator and topoisomerase inhibitor with antitumor activity. Mol Pharmacol. 2006 Sep;70(3):1109-20.

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