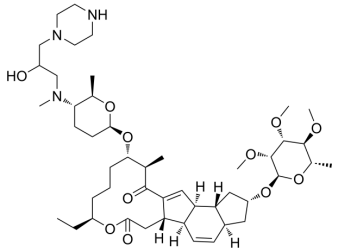
LM2I

Cat. No.:	HY-156112
CAS No.:	2055494-50-1
Molecular Formula:	$C_{47}H_{77}N_3O_{11}$
Molecular Weight:	860.13
Target:	Others
Pathway:	Others
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	LM2I is a derivative of Spinosyn A (SPA). LM2I is argininosuccinate synthase (ASS1) enzyme activator, and tumor inhibitor that directly interact with ASS1. LM2I has significant antiproliferative activity in seven colorectal cancer cell-lines and xenograft tumors of colorectal cancer. LM2I inhibits colorectal cancer cell growth via the EGFR pathway[1].
IC_{50} & Target	Argininosuccinate synthetase (ASS1)[1]

In Vitro

LM2I (0μM~10μM, 48h) shows strong inhibitory effect in CRC cell lines[1].
LM2I (2μM, 15d) inhibits the EGFR pathway in colorectal cancer cells[1].
LM2I inhibits colorectal cancer cells via EGFR[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	CRC cell（HT29, SW480, SW620, HCT116, LoVo, RKO, and DLD1)
Concentration:	0μM,1.25μM,2.5μM,3.75μM,5.00μM,6.25μM,7.5μM,8.75μM,10μM
Incubation Time:	48h
Result:	Inhibited the viability of HT29, SW480, SW620, HCT116, LoVo, RKO, and DLD1 cells.

Cell Proliferation Assay[1]

Cell Line:	HT29 and SW480 cells
Concentration:	0.75μM,1μM
Incubation Time:	14d
Result:	Had almost no effect on EGFR-KO cells.

Western Blot Analysis[1]

Cell Line:	HT29, SW480, SW620, HCT116, LoVo, RKO, DLD1 cell
Concentration:	2μM

Incubation Time:	0~15d
Result:	EGFR protein levels were higher than control group.Time-dependently inhibited the protein levels of EGFR and significantly reduced relative to phosphorylation.

In Vivo

LM2I (2.5 mg/kg/day, ip, every other day for 28 days) inhibits tumor growth in nude mice xenograft model[1].

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

Animal Model:	Female athymic BALB/c nude mice xenograft model(injected subcutaneously into the flank region with HT29 cell)[1].
Dosage:	2.5 mg/kg/day
Administration:	Intraperitoneal injection,every other day for 28 days
Result:	The tumor weight was significantly lower than that of the control group, and the tumor cell density was lower.

REFERENCES

[1]. Peng K, et al. Spinosyn A and Its Derivative Inhibit Colorectal Cancer Cell Growth via the EGFR Pathway. J Nat Prod. 2023 Sep 8.

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