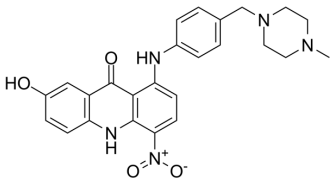
Topoisomerase II inhibitor 4

Cat. No.:	HY-143280
CAS No.:	2560590-49-8
Molecular Formula:	$C_{25}H_{25}N_5O_4$
Molecular Weight:	459.5
Target:	Topoisomerase
Pathway:	Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Topoisomerase II inhibitor 4 (compound E17) is a potent Topoisomerase II inhibitor. Topoisomerase II inhibitor 4 triggers G2/M cell cycle arrest and shows anti-tumor activity with strong cytotoxic and anti-proliferative effect[1].
IC_{50} & Target	Topoisomerase II

In Vitro

Topoisomerase II inhibitor 4 (compound E17) inhibits cancer cells with IC_{50} values of 4.55 μM (MDA-MB-231), 6.61 μM (A549), 2.18 μM (KG1)[1].

Topoisomerase II inhibitor 4 (1 μM; 0-22 h) induces G2/M cell cycle arrest[2].

Topoisomerase II inhibitor 4 (5 μM; 4 h) inhibits topo II-mediated chromosomes condensation in CRC cells, while also (100 μM; 0.5, 1, 2 h) induces topo II–DNA complex accumulation without degradation of topo II[2].

Topoisomerase II inhibitor 4 (1 μM; 4 h) exerts anti-tumor activity without increasing gH2AX levels in HCT116, while no DNA damage and apoptosis as well [2].

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

Cell Migration Assay [2]

Cell Line:	HCT116, and WI-38 cells
Concentration:	0.4, 0.6, 0.8, 1.0, 1.2 μM
Incubation Time:	0, 12, 24, 48 hours
Result:	Resulted migration inhibition in HCT116 and SW480 cells.

Cell Viability Assay[2]

Cell Line:	HCT116, and WI-38 cells
Concentration:	0.39, 0.78, 1.56, 3.12, 6.25, 12.5, 25 μM
Incubation Time:	72 hours
Result:	Exerted anti-proliferative effect in a dose-dependent manner.

REFERENCES

[1]. Li ZY, et al. Structural optimizations and bioevaluation of N-substituted acridone derivatives as strong topoisomerase II inhibitors. Bioorg Chem. 2022 Feb. 119:105543.

[2]. Chen JN, et al. E17 exerts anti-tumor activity through inhibiting topo II-mediated chromosomes condensation in CRC cells. Biochem Biophys Res Commun. 2019 May 28. 513(2):313-318.

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