Topoisomerase IIα-IN-5

Cat. No.: HY-152187

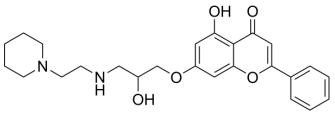
Molecular Formula: $C_{25}H_{30}N_2O_5$

Molecular Weight: 438.52

Target: Topoisomerase; Apoptosis

Pathway: Cell Cycle/DNA Damage; Apoptosis

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Topoisomerase IIα-IN-5 is a topoisomerase II (topo II) α catalytic inhibitor. Topoisomerase IIα-IN-5 intercalates into DNA and binds to the DNA minor groove. Topoisomerase IIα-IN-5 exhibits better efficacy and less genotoxicity than Etoposide (HY-13629)[1].

IC_{50} & Target

topoisomerase II alpha

In Vitro

Topoisomerase IIα-IN-5 (compound 6) (5 μM, 10 μM, and 20 μM; 10 d) inhibits colony formation of DU145 cells[1].
Topoisomerase IIα-IN-5 (1 μM and 10 μM; 72 h) shows antiproliferative against DU145 cells[1].
Topoisomerase IIα-IN-5 has cytotoxicity against DU145, HCT15, and T47D cells with IC_{50}s of 0.13 μM, 9.25 μM, and 0.53 μM, respectively[1].
Topoisomerase IIα-IN-5 (200 μM) interacts with a DNA double helix[1].
Topoisomerase IIα-IN-5 (20 μM; 24 h) induces G2 cell cycle arrest and apoptosis in CRPC cells[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	CRPC cells
Concentration:	0, 5, 10, and 20 μM
Incubation Time:	0, 8, 16, and 24 hours
Result:	Increased the expression of both phosphorylated cdc25c and phosphorylated cdc2.

Apoptosis Analysis[1]

Cell Line:	CRPC cells
Concentration:	0, 5, 10, and 20 μM
Incubation Time:	0, 8, 16, and 24 hours
Result:	Induced cell cycle arrest at G2 phase. Induced cell apoptosis.

REFERENCES

[1]. Jeon KH, et al. Synthesis and evaluation of 7-(3-aminopropyloxy)-substituted flavone analogue as a topoisomerase IIα catalytic inhibitor and its sensitizing effect to enzalutamide in castration-resistant prostate cancer cells. Eur J Med Chem. 2023 Jan 15;246:114999.

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