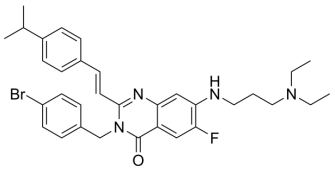
BLM-IN-2

Cat. No.:	HY-151939
Molecular Formula:	$C_{33}H_{38}BrFN_4O$
Molecular Weight:	605.58
Target:	DNA/RNA Synthesis; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	BLM-IN-2 is a Bloom's Syndrome Protein (BLM) inhibitor with an IC_{50} value of 0.8 μM. BLM-IN-2 effectively suppresses the proliferation, invasion, cell cycle arrest and apoptosis of CRC cells. BLM-IN-2 can be used for the reserarch of colorectal cancer (CRC)[1].
IC_{50} & Target	IC50: 0.8 μM (BLM)[1]

In Vitro

BLM-IN-2 (0-20 μM) has good inhibitory effect on BLM unwinding and binding DNA with IC_{50} values of 0.8 μM and 2.3 μM, respectively[1].

BLM-IN-2 exhibits the potent BLM-dependent cytotoxicity against the CRC cells but weak against normal cells[1].

BLM-IN-2 (3 μM; 48 h) disrupts the HRR level while inhibiting BLM located on the DSB site and trigger DNA damage in the CRC cells[1].

BLM-IN-2 (0-5 μM; 48 h) effectively suppresses the proliferation and invasion of CRC cells, along with cell cycle arrest and apoptosis[1].

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

Cell Proliferation Assay[1]

Cell Line:	HCT116 cells; HCT116, SW480 and RKO cells
Concentration:	0-5 μM; 0.5, 1, 2 μM
Incubation Time:	48 h; 10 days
Result:	Induced proliferation arrest. Completely inhibited the growth of cancer cells at the concentration around 2 μM, had a good anti-CRC activity.

Apoptosis Analysis[1]

Cell Line:	HCT116, SW480 and RKO cells
Concentration:	1 μM
Incubation Time:	48 h
Result:	Induced apoptosis and necrosis in HCT116, SW480 and RKO.

Cell Cycle Analysis[1]

Cell Line:	HCT116, SW480 and RKO cells
Concentration:	4 μM
Incubation Time:	48 h
Result:	Changed the cell proportion of the S or G2/M phase in CRC cells, arrested the cell cycle at the S phase in HCT116 and SW480 and arrested the cell cycle of HCT116, SW480 and RKO at the G2/M phase.

Cell Invasion Assay[1]

Cell Line:	HCT116 cells
Concentration:	0.25, 0.5, 1, 2, 4 μM
Incubation Time:	48 h
Result:	Obviously decreased the invasion in HCT116 cells with an IC_{50} value of 1.0 μM and had inhibitory on CRC invasion.

REFERENCES

[1]. Jia-Li Tu, et al. Design, synthesis and evaluation of N3-substituted quinazolinone derivatives as potential Bloom's Syndrome protein (BLM) helicase inhibitor for sensitization treatment of colorectal cancer. Eur J Med Chem. 2022 Nov 21;246:114944.

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