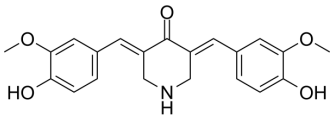
FLDP-5

Cat. No.:	HY-150791
CAS No.:	950665-12-0
Molecular Formula:	$C_{21}H_{21}NO_5$
Molecular Weight:	367.4
Target:	Reactive Oxygen Species; DNA/RNA Synthesis
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; Cell Cycle/DNA Damage
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

FLDP-5 is a blood-brain barrier (BBB) penetrant curcuminoid analogues. FLDP-5 can induce production of ROS (Reactive Oxygen Species), DNA damage and cell cycle S phase arrest. FLDP-5 exhibits highly potent tumour-suppressive effects with anti-proliferative and anti-migratory activities on LN-18 cells[1].

In Vitro

FLDP-5 (0-20 μM; 24 h) has cytotoxicity on human glioblastoma multiforme (GBM) LN-18 cells and HBEC-5i[1].
FLDP-5 (2.5 μM; 0-6 h) induces superoxide and hydrogen peroxide in LN-18 cell death[1].
FLDP-5 (2.5 μM; 0-4 h) induces DNA damage with a time-dependent manner in LN-18 cells[1].
FLDP-5 (1.25 and 2.5 μM; 24 and 48 h) potentiates anti-migration effects in LN-18 cells[1].
FLDP-5 (1.25 and 2.5 μM; 24 h) reduces the percentage of relative invasion in LN-18 cells in a significant dose-dependent manner[1].
FLDP-5 (0.625 and 1.25 μM; 24 h) induces arrest in S phase in a concentration-dependent manner[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	LN-18 and HBEC-5i cells
Concentration:	0-20 μM
Incubation Time:	24 h
Result:	Exhibited cytotoxicity on human GBM LN-18 cells and HBEC-5i with IC_{50}s of 2.4 μM and 5.6 μM.

Cell Migration Assay [1]

Cell Line:	LN-18 cells
Concentration:	1.25 and 2.5 μM
Incubation Time:	24 and 48 h
Result:	Potentiated anti-migration effects in LN-18 cells with wound closure of 56.43% ± 6.28 and 3.17% ± 0.71 at 1.25 μM and 2.5 μM (48 h), respectively.

Cell Invasion Assay[1]

Cell Line:	LN-18 cells
Concentration:	1.25 and 2.5 μM
Incubation Time:	24 h
Result:	Reduced the percentage of relative invasion in LN-18 cells in a significant dose-dependent manner.

Cell Cycle Analysis[1]

Cell Line:	LN-18 cells
Concentration:	0.625 and 1.25 μM
Incubation Time:	24 h
Result:	Induced arrest in S phase in a concentration-dependent manner, and exhibited accumulation of 63.38% ± 4.42 at 1.25 μM.

REFERENCES

[1]. Razali NSC, et al. Curcumin piperidone derivatives induce anti-proliferative and anti-migratory effects in LN-18 human glioblastoma cells. Sci Rep. 2022 Jul 30;12(1):13131.

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