Anticancer agent 32

Cat. No.: HY-143303

CAS No.: 2222930-76-7

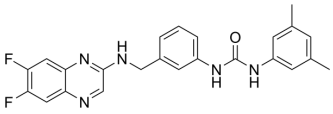
Molecular Formula: $C_{24}H_{21}F_2N_5O$

Molecular Weight: 433.45

Target: Apoptosis

Pathway: Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Anticancer agent 32 (compound 2g) is an anticancer agent. Anticancer agent 32 shows anticancer activities, affects cell cycle and induces cell apoptosis. Anticancer agent 32 can be used for the research of cancer[1].

IC_{50} & Target

IC50: 17.2 μM (MGC-803), 12.3 μM (HeLa), 40.6 μM (NCI-H460), 46.8 μM (HepG2), 95.4 μM (SMMC-7721), 8.9 μM (T-24), 86.8 μM (HL-7702)[1]

In Vitro

Anticancer agent 32 (2.5-40 μM; 48 h) shows cytotoxic activities to cancer cell lines[1].

Anticancer agent 32 (0-16 μM; 24 h) affects cell cycle, induces cell apoptosis, increases intracellular levels of Ca^{2+} and ROS[1].

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

Cell Cytotoxicity Assay[1]

Cell Line:	MGC-803, HeLa, NCI-H460, HepG2, SMMC-7721, T-24 and HL-7702 cell lines
Concentration:	2.5, 5, 10, 20 and 40 μM
Incubation Time:	48 hours
Result:	Inhibited cell growth with IC_{50} values of 17.2, 12.3, 40.6, 46.8, 95.4, 8.9 and 86.8 μM for MGC-803, HeLa, NCI-H460, HepG2, SMMC-7721, T-24 and HL-7702 cells, respectively.

Cell Cycle Analysis[1]

Cell Line:	MGC-803 and T-24 cell lines
Concentration:	0, 8 and 12 μM
Incubation Time:	24 hours
Result:	Significantly induced cell cycle arrest at the G2/M phase in T-24 cells.

Western Blot Analysis[1]

Cell Line:	MGC-803 and T-24 cell lines
Concentration:	4, 8 and 12 μM

Incubation Time:	24 hours
Result:	Decreased expression level of cyclin B1.

Apoptosis Analysis[1]

Cell Line:	MGC-803 and T-24 cell lines
Concentration:	0, 4, 8 and 16 μM
Incubation Time:	24 hours
Result:	Induced cell apoptosis of T-24 cells from 8.21 to 32.91% after treatment by increasing levels of caspase-3 and caspase-9 in T-24 cells.

REFERENCES

[1]. Li GZ, et al. Synthesis and biological evaluation of novel 1,3-diphenylurea quinoxaline derivatives as potent anticancer agents. Med Chem Res 30, 1496–1511 (2021).

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