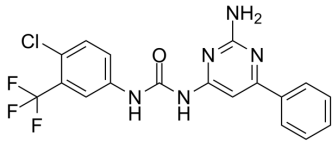
Anticancer agent 71

Cat. No.:	HY-147906
CAS No.:	2453228-45-8
Molecular Formula:	$C_{18}H_{13}ClF_3N_5O$
Molecular Weight:	407.78
Target:	Apoptosis; PARP
Pathway:	Apoptosis; Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Anticancer agent 71 (Compound 4b) is a potent anticancer agent and induces apoptosis. Anticancer agent 71 arrests cell cycle at G2/M phase and induces apoptosis through upregulating Bax, Ikb-α and cleaved PARP and downregulating Bcl-2 expression levels. Anticancer agent 71 shows antiproliferative activity[1].

In Vitro

Anticancer agent 71 (Compound 4b) (0.1-50 μM, 24 hours; SW480 and PC3 cells) increases the cytotoxicity and exerts potent antitumor activities against SW480 and PC3 cells[1].
Anticancer agent 71 (Compound 4b) (11.08 μM, 24 hours; SW480 cells) induces a significant G2/M phase arrest[1].
Anticancer agent 71 (Compound 4b) (11.08 μM, 24 hours) induces apoptosis in SW480 cells by upregulating Bax, Ikb-α and cleaved PARP and downregulating Bcl-2 expression[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Cytotoxicity Assay[1]

Cell Line:	SW480 and PC3 cells
Concentration:	0.1, 1, 12.5, 25 and 50 μM
Incubation Time:	24 hours
Result:	Inhibited with IC_{50} values of 11.08 and 17.39 μM for SW480 and PC3 cells, respectively.

Cell Cycle Analysis[1]

Cell Line:	SW480 cells
Concentration:	11.08 μM
Incubation Time:	24 hours
Result:	The cell population percent at G2/M phase increased to 45.3%.

Apoptosis Analysis[1]

Cell Line:	SW480 cells
Concentration:	11.08 μM

Incubation Time:	24 hours
Result:	The percentage of cells in early and late apoptosis was recorded as 5.69% and 3.52%, respectively.

Western Blot Analysis[1]

Cell Line:	SW480 cells
Concentration:	11.08 μM
Incubation Time:	24 hours
Result:	The expression of antiapoptotic protein Bcl-2 decreased and the expression of Pro apoptotic Bax increased.

REFERENCES

[1]. Kilic-Kurt Z, et al. Synthesis and anticancer activity of some pyrimidine derivatives with aryl urea moieties as apoptosis-inducing agents. Bioorg Chem. 2020 Aug;101:104028.

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