Anticancer agent 69

Cat. No.: HY-146170

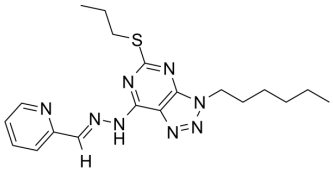
Molecular Formula: $C_{19}H_{26}N_8S$

Molecular Weight: 398.53

Target: Reactive Oxygen Species; EGFR; Apoptosis

Pathway: Immunology/Inflammation; Metabolic Enzyme/Protease; NF-κB; JAK/STAT Signaling; Protein Tyrosine Kinase/RTK; Apoptosis

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



BIOLOGICAL ACTIVITY

Description

Anticancer agent 69 (Compound 34), a potent and selective anticancer agent , potently and selectively inhibits human prostate cancer cell line PC3 (IC_{50}=26 nM). Anticancer agent 69 increases ROS level, down-regulates EGFR and induces apoptosis[1].

In Vitro

Anticancer agent 69 (Compound 34, 0-20 μM approximately, 72 h) has selective anticancer activity in PC3 cells with an IC_{50} value of 26 nM against other cancer cell lines and normal cell lines[1].
Anticancer agent 69 (1-7 days) inhibits the cell viabilities of PC3 cells and PC9 cells in a time- and dose-dependent manne[1].
Anticancer agent 69 (0-100 nM, 7 days) forms fewer and smaller colonies compared those with DMSO-treated cells[1].
Anticancer agent 69 (0-800 nM, 34/72 h) increases ROS production, and further stimulates Prx I-III expression, phosphorylation level of MAPK ‘s downstream proteins, expression of apoptosis-related proteins[1].
Anticancer agent 69 (0-500 nM, 72 h) decreases the level of EGFR and phosphorylation level of its downstream protein (ERK, AKT), and induces PC3 cells and PC9 cells apoptosis in a dose-dependent manner[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Western Blot Analysis[1]

Cell Line:	PC3, PC9
Concentration:	0-800 nM
Incubation Time:	72 h
Result:	Stimulated Prx I-III expression, phosphorylation level of MAPK ‘s downstream proteins (P38, JNK), expression of apoptosis-related proteins (Bax, cleaved-Caspased 3). Inhibited the level of EGFR and its downstream protein (p-ERK, p-AKT). Increased pro-apoptotic proteins (Bax and P53) expression and reduces anti-apoptotic protein (Bcl-2) expression.

Cell Proliferation Assay[1]

Cell Line:	PC3, PC9
Concentration:	0-100 nM
Incubation Time:	7 days

Result:	Formed fewer and smaller colonies compared those with DMSO-treated cells.
Cell Viability Assay[1]	
Cell Line:	Cancer cell lines (PC3, MGC-803, PC9, EC9706, SMMC-7721), normal cell lines (Het-1A, L02 and GES-1)
Concentration:	0-20 μM approximately
Incubation Time:	72 h
Result:	Inhibited proliferation of multiple cancer cell lines with IC_{50} values of 26 nM (PC3), 557 nM (MGC-803), 148 nM (PC9), 3.99 μM (EC9706), 844 nM (SMMC-7721), respectively. Displayed good selectivity against normal cell lines with IC_{50} values of > 20 μM (L02), > 5 μM (Het-1A), 1.57 μM (GES-1), respectively.

REFERENCES

[1]. Chenhao Xu, et al. Novel [1,2,3]triazolo[4,5-d]pyrimidine derivatives containing hydrazone fragment as potent and selective anticancer agents. Bioorg Chem. 2020 Dec;105:104424.

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