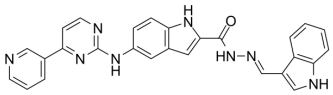
CDK9-IN-18

Cat. No.:	HY-147905
CAS No.:	1804127-83-0
Molecular Formula:	$C_{27}H_{20}N_8O$
Molecular Weight:	472.5
Target:	CDK; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

CDK9-IN-18 is a potent CDK9 inhibitor. CDK9-IN-18 blocks the phosphorylation function of kinase CDK9. CDK9-IN-18 exhibits both good anticancer activity and low cellular activity. CDK9-IN-18 induces apoptosis.

In Vitro

CDK9-IN-18 (compound 12i) (0-20 μM, 3 hours; NH2 cells) suppress both HIV-1 transcription and the phosphorylation at Serine 2 of the RNAPII CTD in a dose-dependent manner[1].

CDK9-IN-18 (compound 12i) (0-5.0 μM, 24 hours; human tumor cell lines) exerts antiproliferative effect through the induction of apoptosis in HepG2 cells[1].

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

Western Blot Analysis[1]

Cell Line:	NH2 cells
Concentration:	0.1, 0.2, 0.5, 1.0 and 2.0 μM
Incubation Time:	3 hours
Result:	P-Ser2 level of RNAPII CTD decreased in a dose-dependent fashion.

Cell Cytotoxicity Assay[1]

Cell Line:	A375 (skin cancer), A549 (lung cancer), HepG2 (liver cancer) and MCF-7 (breast cancer)
Concentration:	2.0 μM
Incubation Time:	24 hours
Result:	Inhibited with IC_{50} values of 0.10, 0.53, 0.07 and 0.10 μM for A375, A549, HepG2 and MCF-7 cells, respectively.

Western Blot Analysis[1]

Cell Line:	A375 (skin cancer), A549 (lung cancer), HepG2 (liver cancer) and MCF-7 (breast cancer)
Concentration:	0.1, 0.2, 0.5, 1.0, 2.0 and 5.0 μM
Incubation Time:	24 hours

Result:	The expression level of the specific apoptosisassociated protein (cleaved PARP) increased in a dose-dependent fashion.

Cell Cytotoxicity Assay[1]

Cell Line:	HepG2 cells
Concentration:	1.0 and 5.0 μM
Incubation Time:	24 hours
Result:	The percentage of cells in late apoptosis was recorded as 24.2% and 36.3% at 1.0 and 5.0 μM concentrations, respectively.

REFERENCES

[1]. Hu H, et al. Design, synthesis and biological evaluation of methylenehydrazine-1-carboxamide derivatives with (5-((4-(pyridin-3-yl)pyrimidin-2-yl)amino)-1H-indole scaffold: Novel potential CDK9 inhibitors. Bioorg Chem. 2020 Sep;102:104064.

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