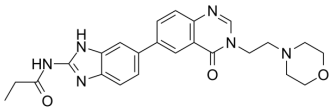
Aurora A inhibitor 2

Cat. No.:	HY-146037
CAS No.:	2412144-74-0
Molecular Formula:	$C_{24}H_{26}N_6O_3$
Molecular Weight:	446.5
Target:	Apoptosis; Aurora Kinase
Pathway:	Apoptosis; Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

Aurora A inhibitor 2 (Compound 16h) is a potent Aurora A kinase inhibitor with an IC_{50} of 21.94 nM. Aurora A inhibitor 2 induces caspase-dependent apoptosis in MDA-MB-231 cells[1].

IC_{50} & Target

Aurora A	Aurora B
21.94 nM (IC_{50})	273.18 nM (IC_{50})

In Vitro

Aurora A inhibitor 2 (Compound 16h) (0-20 μM, 48 h) shows potent antiproliferative activity against various human cancer cells, and inhibits colony formation[1].

Aurora A inhibitor 2 (0-4 μM, 24 h) inhibits the expression of phosphorylation of Aurora A and Histone H3 in a dose-dependent manner, and induces G2/M cell cycle arrest [1].

Aurora A inhibitor 2 (0-4 μM, 48 h) induces obvious apoptosis in MDA-MB-231 cells 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:	Breast cancer MDA-MB231, prostate cancer PC3, and neuroblastoma SH-SY5Y cells
Concentration:	0-20 μM
Incubation Time:	48 h
Result:	Displayed potent antiproliferative activity with IC_{50} values of 0.38 ± 0.08, 1.09 ± 0.24, and 0.77 ± 0.12 μM against MDA-MB-231, PC3, and SH-SY5Y cells.

Western Blot Analysis[1]

Cell Line:	MDAMB-231
Concentration:	1, 2, and 4 μM
Incubation Time:	24 h
Result:	A dose-dependent and significant reduction in the phosphorylation of Aurora A and Histone H3 was observed. Significantly increased the levels of cleaved caspase 3/9 and cleaved-PARP.

Cell Cycle Analysis[1]

Cell Line:	MDAMB-231
Concentration:	1, 2, and 4 μM
Incubation Time:	24 h
Result:	Dose-dependently increased the and population of cells in the G2/M phase.

Apoptosis Analysis[1]

Cell Line:	MDAMB-231
Concentration:	1, 2, and 4 μM
Incubation Time:	48 h
Result:	Induced obvious apoptosis in a concentration-dependent manner.

REFERENCES

[1]. Chengcheng Fan, et al. Design, synthesis, biological evaluation of 6-(2-amino-1H-benzo[d]imidazole-6-yl)quinazolin-4(3H)-one derivatives as novel anticancer agents with Aurora kinase inhibition. Eur J Med Chem. 2020 Mar 15;190:112108.

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