CDK1-IN-5

Cat. No.: HY-151409

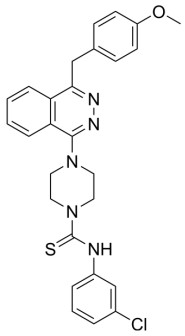
Molecular Formula: $C_{27}H_{26}ClN_5OS$

Molecular Weight: 504.05

Target: CDK

Pathway: Cell Cycle/DNA Damage

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



BIOLOGICAL ACTIVITY

Description

CDK1-IN-5 (10h) is a selective CDK1 inhibitor with IC_{50}s of 42.19, 188.71 and 354.15 nM for CDK1, CDK2 and CDK5, respectively. CDK1-IN-5 inhibits growth of cancer cells by affecting cell cycle. CDK1-IN-5 can be used for the research of cancer[1].

IC_{50} & Target			
	CDK1	CDK2	CDK5
	42.19 nM (IC_{50})	188.71 nM (IC_{50})	354.15 nM (IC_{50})

In Vitro

CDK1-IN-5 (0-10 μM; 24 h) inhibits the growth of various cancer cells[1].

CDK1-IN-5 (0-1 μM) inhibits CDK1, CDK2 and CDK5 with IC_{50}s of 42.19, 188.71 and 354.15 nM, respectively[1].

CDK1-IN-5 (0-10 μM) inhibits AXL, PTK2B, FGFR, JAK1, IGF1R and BRAF kinases with IC_{50}s of 5649, 8945, 2538, 2417, 8546 and 8138 nM, respectively[1].

CDK1-IN-5 (0.73 μM; 24 h) decreases CDK1 protein level in virto and affects cell cycle[1].

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

Cell Proliferation Assay[1]

Cell Line:	PDAC, melanoma, leukemia, colon, and breast cancer cell lines
Concentration:	0-10 μM
Incubation Time:	24 hours
Result:	Inhibited cell growth of PDAC, melanoma, leukemia, colon and breast cancer cells over 62%, and inhibited MDA-PATC53 and PL45 cells with IC_{50}s of 0.73 and 1 μM, respectively.

Western Blot Analysis[1]

Cell Line:	MDA-PATC53 cell line
Concentration:	0.73 μM
Incubation Time:	24 hours
Result:	Downregulated the CDK1 protein level compared to untreated cells.

Cell Cycle Analysis[1]

Cell Line:	MDA-PATC53 cell line
Concentration:	0.73 μM
Incubation Time:	24 hours
Result:	Significantly arrested in G2/M phase of the cell cycle compared with the untreated cells.

REFERENCES

[1]. Akl L, et al. Identification of novel piperazine-tethered phthalazines as selective CDK1 inhibitors endowed with in vitro anticancer activity toward the pancreatic cancer. Eur J Med Chem. 2022 Aug 31;243:114704.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA