CDK1-IN-4

Cat. No.: HY-151408

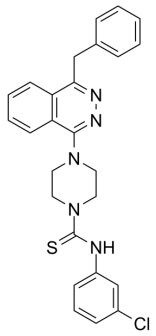
Molecular Formula: $C_{26}H_{24}ClN_5S$

Molecular Weight: 474.02

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-4 (10d) is a selective CDK1 inhibitor with IC_{50}s of 44.52, 624.93 and 135.22 nM for CDK1, CDK2 and CDK5, respectively. CDK1-IN4 inhibits the growth of cancer cells by affecting cell cycle. CDK1-IN-4 can be used for the research of cancer[1].

IC_{50} & Target			
	CDK1	CDK2	CDK5
	44.52 nM (IC_{50})	621.93 nM (IC_{50})	135.22 nM (IC_{50})

In Vitro

CDK1-IN-4 (0-10 μM; 24 h) inhibits the growth of PDAC, melanoma, leukemia, colon and breast cancer cells[1].
CDK1-IN-4 (0-1 μM) inhibits CDK1, CDK2 and CDK5 with IC_{50}s of 36.8, 305.17 and 369.37 nM, respectively[1].
CDK1-IN-4 (0-10 μM) inhibits AXL, PTK2B, FGFR, JAK1, IGF1R and BRAF kinases with IC_{50}s of 2488, 8957, 7620, 8541, 4294 and 1156 nM, respectively[1].
CDK1-IN-4 (0.88 μM; 24 h) decreases CDK1 protein level in vitro 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 cell over 69%, and inhibited MDA-PATC53 and PL45 cells with IC_{50}s of 0.88 and 1.14 μM, respectively.

Western Blot Analysis[1]

Cell Line:	MDA-PATC53 cell line
Concentration:	0.88 μM
Incubation Time:	24 hours
Result:	Downregulated CDK1 protein level compared to untreated cells.

Cell Cycle Analysis[1]

Cell Line:	MDA-PATC53 cell line
Concentration:	0.88 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