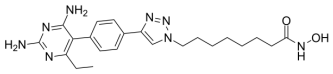
HDAC-IN-46

Cat. No.:	HY-150597
CAS No.:	2562386-85-8
Molecular Formula:	$C_{22}H_{30}N_8O_2$
Molecular Weight:	438.53
Target:	HDAC; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description

HDAC-IN-46 (compound 12c) is a potent HDAC inhibitor with an IC_{50} value of 0.21 μM and 0.021 μM for HDAC1 and HDAC6, respectively. HDAC-IN-46 upregulates p-p38, and downregulates Bcl-xL and cyclin D1 in MDA-MB-231 cells. HDAC-IN-46 induces significant G2 phase arrest and apoptosis. HDAC-IN-46 can be used for researching triple-negative breast cancer (TNBC)[1].

IC_{50} & Target

HDAC1	HDAC6
0.21 μM (IC_{50})	0.021 μM (IC_{50})

In Vitro

HDAC-IN-46 (compound 12c) has antiproliferative activity against MDA-MB-231, A549 and MCF-7 with IC_{50}s of 88.46±10.5 μM, 83.34 ± 15.5 μM and 21.4±3.7 μM, respectively[1].

HDAC-IN-46 (5, 12.5 and 25 μM; 24 h) causes concentration-dependent upregulation of p-p38 and downregulation of Bcl-xL and cyclin D1 in MDA-MB-231 cells[1].

HDAC-IN-46 (12.5 and 25 μM; 48 h) induces significant G2 phase arrest and apoptosis[1].

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

Western Blot Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	5, 12.5 and 25 μM
Incubation Time:	24 h
Result:	Caused concentration-dependent upregulation of p-p38 and downregulation of Bcl-xL and cyclin D1.

Cell Cycle Analysis[1]

Cell Line:	MDA-MB-231 cells
Concentration:	12.5 and 25 μM
Incubation Time:	48 h
Result:	Induced significant G2 phase arrest and apoptosis.

REFERENCES

[1]. Wu B, et al. Pyrimethamine conjugated histone deacetylase inhibitors: Design, synthesis and evidence for triple negative breast cancer selective cytotoxicity. Bioorg Med Chem. 2020 Mar 15;28(6):115345.

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