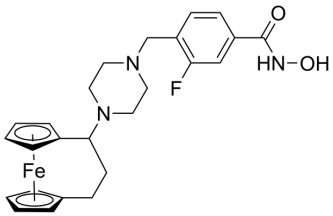
HDAC6-IN-15

Cat. No.:	HY-152235
Molecular Formula:	$C_{25}H_{28}FFeN_3O_2$
Molecular Weight:	477.35
Target:	HDAC
Pathway:	Cell Cycle/DNA Damage; Epigenetics
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	HDAC6-IN-15 is a selective histone deacetylase 6 (HDAC6) inhibitor. HDAC6-IN-15 has potent inhibitory activity for HDAC6 with IC_{50} value of 38.2 nM. HDAC6-IN-15 can be used for the research of cancer and neurodegenerative diseases[1].
IC_{50} & Target	HDAC6 38.2 nM (IC_{50})

In Vitro

HDAC6-IN-15 (Compound II-5) has potent inhibitory activity for HDAC6 with IC_{50} value of 38.2 nM[1].
HDAC6-IN-15 (50 μL; 48 h) has antitumor activity against 22RV1, MM1.S, MV4-11, JEKO-1 and 4T1 cells with IC_{50} value of 8.90 μM, 11.90 μM, 7.83 μM, 4.80 μM and 16.51 μM, respectively[1].
HDAC6-IN-15 (100, 200, 400, 800 nM; 24 h) dose-dependently induces accumulation of acetylated a-tubulin[1].
HDAC6-IN-15 (5, 10 μM; 24 h) can induce cellular apoptosis[1].
HDAC6-IN-15 (4 mg/mL; 48 h) demonstrates an optimal profile on human plasma stability[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay[1]

Cell Line:	22RV1, MM1.S, MV4-11, JEKO-1 and 4T1 cells
Concentration:	50 μL
Incubation Time:	48 h
Result:	Showed moderate anti-proliferative activities in all the cancer cell lines.

Western Blot Analysis[1]

Cell Line:	JEKO-1 cells; 4T1 cells
Concentration:	100, 200, 400, 800 nM; 5, 10 μM
Incubation Time:	24 h
Result:	Significantly increase the levels of acetylated α-tubulin in a concentration dependent manner. Slightly increased the levels of histone H3 and H4 acetylation. Significantly increased the ratio of acetylated α-tubulin at the concentration of 800 nM.

	Dramatically increased the levels of cleavage of PARP and caspase-3 in cells dose-dependently.
Apoptosis Analysis[1]	
Cell Line:	4T1 cells
Concentration:	5, 10 μM
Incubation Time:	24 h
Result:	Triggered apoptosis in 4T1 cells in a dose-dependent manner, in particularly undergoing early stage apoptosis upon 18 h treatment.

REFERENCES

[1]. Jiangkun Yan, et al. Synthesis and bioactivity evaluation of ferrocene-based hydroxamic acids as selective histone deacetylase 6 inhibitors. Eur J Med Chem. 2023 Jan 15;246:115004.

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