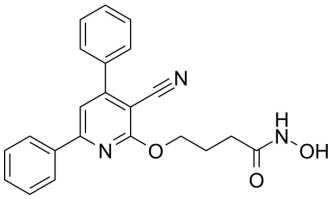
PIM-1/HDAC-IN-1

Cat. No.:	HY-143233
CAS No.:	2897622-19-2
Molecular Formula:	$C_{22}H_{19}N_3O_3$
Molecular Weight:	373.4
Target:	Pim; HDAC; Apoptosis
Pathway:	JAK/STAT Signaling; Cell Cycle/DNA Damage; Epigenetics; Apoptosis
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	PIM-1/HDAC-IN-1 (compound 4d) is a PIM-1 inhibitor, with an IC_{50} of 343.87 nM. PIM-1/HDAC-IN-1 has strong inhibitory activity and selectivity against HDAC 1 and HDAC 6, with IC_{50} values of 63.65 and 62.39 nM, respectively. PIM-1/HDAC-IN-1 exhibits apoptosis inducing potential in MCF-7 cell lines. PIM-1/HDAC-IN-1 shows pre-G1 apoptosis and cell cycle arrest at G2/M phase[1].

IC_{50} & Target				
	HDAC6 62.39 ± 3. nM (IC_{50})	HDAC1 63.65 ± 3. nM (IC_{50})	HDAC 65.94 ± 3. nM (IC_{50})	HDAC2 132.62 nM (IC_{50})
	HDAC4 265.47 nM (IC_{50})	HDAC3 323.02 nM (IC_{50})	HDAC8 406.66 nM (IC_{50})	PIM1 343.87 ± 1 nM (IC_{50})

In Vitro	PIM-1/HDAC-IN-1 (compound 4d) displays strong antiproliferative activity against cancer cell lines, with GI50 (growth inhibitory activity) ≤ 3 μM (GI50 range from 0.325 to 2.9 μM)[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Bass AKA, et al. Utilization of cyanopyridine in design and synthesis of first-in-class anticancer dual acting PIM-1 kinase/HDAC inhibitors. Bioorg Chem. 2022 Feb;119:105564.

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