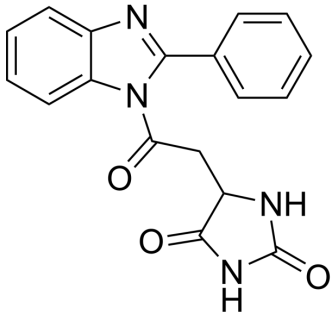
HDAC-IN-70

Cat. No.:	HY-162377
Molecular Formula:	$C_{18}H_{14}N_4O_3$
Molecular Weight:	334.33
Target:	HDAC; Apoptosis; Necroptosis
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-70 (compound 4c) is HDAC6 inhibitor with the IC_{50} values of 64.13 nM, 166 nM, 618 nM and 253 nM for HDAC6, HDAC1, HDAC2 and HDAC4, respectively. HDAC-IN-70 induces cell cycle arrest, apoptosis and necrotic. HDAC-IN-70 can be used for study of leukemia[1].

IC_{50} & Target

HDAC6	HDAC1	HDAC2	HDAC4
64.13 nM (IC_{50})	166 nM (IC_{50})	618 nM (IC_{50})	253 nM (IC_{50})

In Vitro

HDAC-IN-70 (compound 4c) (0-120 μM) shows cytotoxic activity against CCRF-CEM and MOLT-4 cells with the IC_{50} values of 1.82 , 6.73 μM[1].

HDAC-IN-70 (1.82 μM, 24 h) arrests cell cycle at G2-M phase in CCRF-CEM cells[1].

HDAC-IN-70 (1.82 μM, 24 h) increases the percentage of total apoptosis and necrotic in CCRF-CEM cells[1].

HDAC-IN-70 (1.82 μM, 24 h) increases the level of acetylated histones H3, H4 in CCRF-CEM leukemia cells[1].

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

Cell Cycle Analysis[1]

Cell Line:	CCRF-CEM cells
Concentration:	1.82 μM
Incubation Time:	24 h
Result:	Arrested cell cycle at G2-M phase.

Apoptosis Analysis[1]

Cell Line:	CCRF-CEM cells
Concentration:	1.82 μM
Incubation Time:	24 h
Result:	Increased the percentage of total apoptosis to 80.44%.

REFERENCES

[1]. Abdulwahab HG, et al. Discovery of novel benzimidazole derivatives as potent HDACs inhibitors against leukemia with (Thio)Hydantoin as zinc-binding moiety: Design, synthesis, enzyme inhibition, and cellular mechanistic study. Bioorg Chem. Published online March 13, 2024.

Caution: Product has not been fully validated for medical applications. For research use only.

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