SAHA-OH

Cat. No.: HY-151569

CAS No.: 2857098-30-5

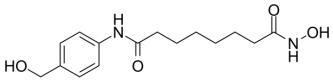
Molecular Formula: $C_{15}H_{22}N_2O_4$

Molecular Weight: 294.35

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

SAHA-OH is a selective HDAC6 inhibitor (IC_{50}=23 nM), shows a 10- to 47-fold selectivity for HDAC6 compared to HDAC 1, 2, 3, and 8. SAHA-OH shows anti-inflammatory activity, and attenuates macrophage apoptosis[1].

IC_{50} & Target

HDAC6	HDAC1	HDAC3	HDAC2
23 nM (IC_{50})	237 nM (IC_{50})	359 nM (IC_{50})	399 nM (IC_{50})

HDAC8
1070 nM (IC_{50})

In Vitro

SAHA-OH (0.67-10.76 μM; 51 h) shows inhibition in bone marrow macrophages[1].
SAHA-OH (0.01 μM; 3 h) treatment in BMMØs (bone marrow macrophages) reduces IL-6, TNFα, IFNβ, IL-1β, IL-10, MCP-1 (CCL2) and GROα (CXCL1) secretions[1].
SAHA-OH (10 μM; 4 or 9 h) treatment induces acetylation of cytoplasmic α-tubulin and nuclear histone H3[1].
SAHA-OH (0-30 μM; 3 h) treatment attenuates macrophage apoptosis[1].
SAHA-OH (0-30 μM; 3 h) treatment attenuates B cell death[1].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Viability Assay[1]

Cell Line:	BMMØs (bone marrow macrophages)
Concentration:	0.67-10.76 μM
Incubation Time:	51 h
Result:	Showed IC_{50} value in unstimulated BMMØs of 1.26 μM, and showed IC_{50} value in LPS-stimulated BMMØs of 10.76 μM.

Apoptosis Analysis[1]

Cell Line:	BMMØs (bone marrow macrophages)
Concentration:	0-30 μM
Incubation Time:	3 h

Result:	Resulted in a 24- to 26-fold increase in cellular viability as compared to the SAHA treatment.

Cell Cytotoxicity Assay[1]

Cell Line:	B cells
Concentration:	0-30 μM
Incubation Time:	3 h
Result:	Resulted in a 5-fold enhancement in viability and a 3-fold decrease in cell death for the B cell population.

Western Blot Analysis[1]

Cell Line:	BMMØs (bone marrow macrophages)
Concentration:	10 μM
Incubation Time:	4 or 9 h
Result:	Resulted in the acetylation of α-tubulin. Induced the acetylation of histone H3 compared to no treatment (NT).

In Vivo

SAHA-OH (intraperitoneal injection; 50 mg/kg; once) treatment prevents splenic organ damage, and reduces plasma proinflammatory cytokine levels in LPS-induced endotoxemia mouse model[1].

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

Animal Model:	LPS-induced endotoxemia mouse model[1]
Dosage:	50 mg/kg
Administration:	Intraperitoneal injection; 50 mg/kg; once
Result:	Reduced proinflammatory cytokine secretions by about 50% compared to no treatment (NT) control mice. Showed similar architecture as no treatment (NT) control and displayed well-organized lymphoid follicles.

REFERENCES

[1]. Nhu Truong, et al. Modified Suberoylanilide Hydroxamic Acid Reduced Drug-Associated Immune Cell Death and Organ Damage under Lipopolysaccharide Inflammatory Challenge. ACS Pharmacol. Transl. Sci. 2022.

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