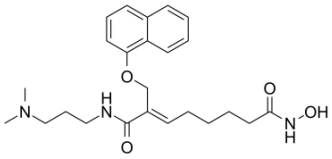
CG-200745

Cat. No.:	HY-16138
CAS No.:	936221-33-9
Molecular Formula:	$C_{24}H_{33}N_3O_4$
Molecular Weight:	427.54
Target:	HDAC; Autophagy; Apoptosis
Pathway:	Cell Cycle/DNA Damage; Epigenetics; Autophagy; Apoptosis
Storage:	Please store the product under the recommended conditions in the COA.



BIOLOGICAL ACTIVITY

Description	CG-200745 is a potent **HDAC** inhibitor which has the hydroxamic acid moiety to bind zinc at the bottom of catalytic pocket. CG200745 inhibits deacetylation of histone H3 and tubulin. CG200745 induces **apoptosis**[1][2].
IC_{50} & Target	HDAC

In Vitro

CG200745 induces the accumulation of p53, promotes p53-dependent transactivation, and enhances the expression of MDM2 and p21 (Waf1/Cip1) proteins[1][2].

CG-200745 (0-10 μM; 48 hours) reduces the Calu6 cells proliferation to 40% of untreated cells[3].

CG-200745 (3 μM; 1-24 hours) significantly increases Calu6 cells proportion in G2/M phase (69%)[3].

CG-200745 (0-10 μM; 1-24 hours) treatment with low concentration significantly increases the acetylation of histone H3 and H4 in Calu6 cells at various sites in a time-dependent manner up to 24 hours after treatment[3].

Cell Proliferation Assay[3]

Cell Line:	Calu6 cells
Concentration:	0-10 μM
Incubation Time:	48 hours
Result:	Reduced the cell proliferation to 40% of untreated cells.

Cell Cycle Analysis[3]

Cell Line:	Calu6 cells
Concentration:	3 μM
Incubation Time:	1, 8, 12, 24 hours
Result:	Increased significantly cell proportion in G2/M phase (69%).

Western Blot Analysis[3]

Cell Line:	Calu6 cells

Concentration:	0-10 μM
Incubation Time:	1, 4, 8, 12, 24 hours
Result:	Increased the acetylation of histone H3 and H4 at various sites in a time-dependent manner.

In Vivo

CG-200745 (p.o.; 30 mg/kg/day; for 7 days) attenuates oxidative stress, inflammatory cytokines, and adhesion molecules in UUO kidneys[4].

Animal Model:	Male 8-week-old C57BL/6 J mice weighing 20~22 g of unilateral ureteral obstruction (UUO)[4]
Dosage:	30 mg/kg
Administration:	P.o.; daily; for 7 days
Result:	Attenuated oxidative stress, inflammatory cytokines and adhesion molecules in UUO kidneys.

REFERENCES

[1]. Oh ET, et al. Novel histone deacetylase inhibitor CG200745 induces clonogenic cell death by modulating acetylation of p53 in cancer cells. Invest New Drugs. 2012 Apr;30(2):435-42.

[2]. Hwang JJ, et al. A novel histone deacetylase inhibitor, CG200745, potentiates anticancer effect of docetaxel in prostate cancer via decreasing Mcl-1 and Bcl-XL. Invest New Drugs. 2012 Aug;30(4):1434-42.

[3]. Chun SM, et al. Epigenetic modulation with HDAC inhibitor CG200745 induces anti-proliferation in non-small cell lung cancer cells. PLoS One. 2015 Mar 17;10(3):e0119379.

[4]. Choi HS, et al. Histone deacetylase inhibitor, CG200745 attenuates renal fibrosis in obstructive kidney disease. Sci Rep. 2018 Aug 1;8(1):11546.

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