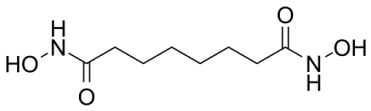
# Data Sheet

| | |
|---|---|
| **Product Name:** | Suberoyl bis-hydroxamic acid |
| **Cat. No.:** | CS-W010492 |
| **CAS No.:** | 38937-66-5 |
| **Molecular Formula:** | $C_8H_{16}N_2O_4$ |
| **Molecular Weight:** | 204.22 |
| **Target:** | Apoptosis; HDAC |
| **Pathway:** | Apoptosis; Cell Cycle/DNA Damage; Epigenetics |
| **Solubility:** | H2O : 8.33 mg/mL (40.79 mM; Need ultrasonic); DMSO : 50 mg/mL (244.83 mM; Need ultrasonic) |



## BIOLOGICAL ACTIVITY:

Suberoyl bis-hydroxamic acid (Suberohydroxamic acid; SBHA) is a competitive and cell-permeable **HDAC1** and **HDAC3** inhibitor with **$ID_{50}$** values of 0.25 μM and 0.30 μM, respectively[1].Suberoyl bis-hydroxamic acid renders MM cells susceptible to **apoptosis** and facilitates the mitochondrial apoptotic pathways[2].Suberoyl bis-hydroxamic acid can be used for the study of medullary thyroid carcinoma (MTC)[3]. **In Vitro:** Suberoyl bis-hydroxamic acid (10, 20 or 50 μM; 24 hours) combination with TRAIL improves apoptosis extent, and when TRAIL is combined with 20 μM SBHA (itself causing only 10–15% apoptosis), resulting in 45–50% cell death[1].
Suberoyl bis-hydroxamic acid (20-50 μM; 10-20 hours) alone has little effect on the expression of the proteins Bcl-xL, Mcl-1, and has albeit mildeffect on Bax. When it combines with TRAIL,which increases the ratio of relative protein expression of Bcl-xL and Bax in early periods, while the change in the ratio of Mcl-1 and Bax increases later in MM-BI and Ist-Mes2 cells[1].
Suberoyl bis-hydroxamic acid (30 μM; 6 hours) causes accumulation of acetylated histone H4 in MEL cells[2].
**In Vivo:** Suberoyl bis-hydroxamic acid (intraperitoneal injection; 200 mg/kg; every 2 days; 12 days) reveals a marked increase in the active form of Notch1 (NICD) with a concomitant decrease in ASCL1. It reduces the MTC tumor growth[3].

## References:

[1]. Jiri Neuzil, et al. Sensitization of Mesothelioma to TRAIL Apoptosis by Inhibition of Histone Deacetylase: Role of Bcl-xL Down-Regulation. Biochem Biophys Res Commun. 2004 Jan 30;314(1):186-91.

[2]. V M Richon, et al. A Class of Hybrid Polar Inducers of Transformed Cell Differentiation Inhibits Histone Deacetylases.Proc Natl Acad Sci U S A

[3]. Li Ning, et al. Suberoyl Bishydroxamic Acid Activates notch1 Signaling and Suppresses Tumor Progression in an Animal Model of Medullary Thyroid Carcinoma. Ann Surg Oncol. 2008 Sep;15(9):2600-5.

## CAIndexNames:

Octanediamide, N1,N8-dihydroxy-

## SMILES:

O=C(NO)CCCCCCC(NO)=O

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

Tel: 732-484-9848 Fax: 888-484-5008 E-mail: sales@ChemScene.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA