Certificate of Analysis

Product Name: **SAHA** **Catalog No.: 4652** **Batch No.: 2**

CAS Number: 149647-78-9

IUPAC Name: *N*-Hydroxy-*N*'-phenyloctanediamide

1. PHYSICAL AND CHEMICAL PROPERTIES

Batch Molecular Formula: $C_{14}H_{20}N_2O_3$

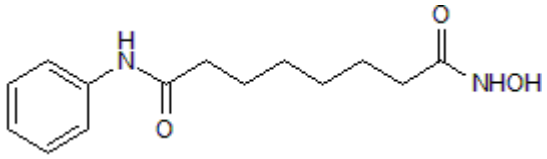
Batch Molecular Weight: 264.32

Physical Appearance: White solid

Solubility: DMSO to 100 mM
ethanol to 5 mM with gentle warming

Storage: Store at -20°C

Batch Molecular Structure:



2. ANALYTICAL DATA

Melting Point: Between 159 - 160°C

HPLC: Shows 99.3% purity

^{1}H NMR: Consistent with structure

Mass Spectrum: Consistent with structure

Microanalysis:

	Carbon	Hydrogen	Nitrogen
Theoretical	63.62	7.63	10.6
Found	63.6	7.67	10.76

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Description:

Inhibits Class I and II histone deacetylases (HDACs); induces accumulation of acetylated histones H2A, H2B, H3 and H4 in transformed cultured cells. Suppresses cell growth in a range of cancer cell lines; induces apoptosis in cutaneous T cell lymphoma cells in vitro.

Physical and Chemical Properties:

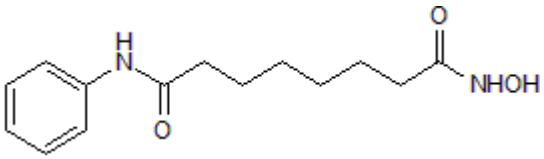
Batch Molecular Formula: $C_{14}H_{20}N_2O_3$

Batch Molecular Weight: 264.32

Physical Appearance: White solid

Minimum Purity: >98%

Batch Molecular Structure:



Storage: Store at -20°C

Solubility & Usage Info:

DMSO to 100 mM
ethanol to 5 mM with gentle warming

Stability and Solubility Advice:

Some solutions can be difficult to obtain and can be encouraged by rapid stirring, sonication or gentle warming (in a 45-60°C water bath).

Information concerning product stability, particularly in solution, has rarely been reported and in most cases we can only offer a general guide. Our standard recommendations are:

SOLIDS: Provided storage is as stated on the product label and the vial is kept tightly sealed, the product can be stored for up to 6 months from date of receipt.

SOLUTIONS: We recommend that stock solutions, once prepared, are stored aliquoted in tightly sealed vials at -20°C or below and used within 1 month. Wherever possible solutions should be made up and used on the same day.

References:

Butler *et al* (2000) Suberoylanilide hydroxamic acid, an inhibitor of histone deacetylase, suppresses the growth of prostate cancer cells in vitro and in vivo. Cancer Res. ***60*** 5165. PMID: 11016644.

Leoni *et al* (2002) The antitumor histone deacetylase inhibitor suberoylanilide hydroxamic acid exhibits antiinflammatory properties via suppression of cytokines. Proc.Natl.Acad.Sci.U.S.A ***99*** 2995. PMID: 11867742.

Marks and Breslow (2007) Dimethyl sulfoxide to vorinostat: development of this histone deacetylase inhibitor as an anticancer drug. Nat.Biotechnol. ***25*** 84. PMID: 17211407.

Huangfu *et al* (2008) Induction of pluripotent stem cells by defined factors is greatly improved by small-molecule compounds. Nat.Biotechnol. ***26*** 795. PMID: 18568017.