# PRODUCT INFORMATION

## coumarin-SAHA

*Item No. 10671*

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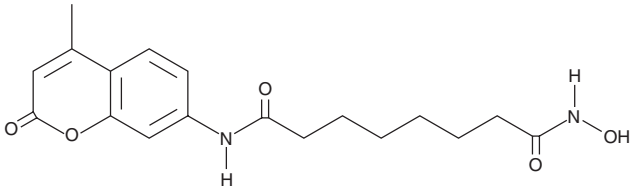
| **CAS Registry No.:** | 1260635-77-5 |
| **Formal Name:** | N1-hydroxy-N8-(4-methyl-2-oxo-2H-chromen-7-yl)-octanediamide |
| **Synonym:** | coumarin-Suberoylanilide Hydroxamic Acid |
| **MF:** | $C_{18}H_{22}N_2O_5$ |
| **FW:** | 346.4 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 229, 328 nm |
| **Ex./Em. Max:** | 325/400 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥2 years |



*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

coumarin-suberoylanilide hydroxamic acid (c-SAHA) is supplied as a crystalline solid. A stock solution may be made by dissolving the c-SAHA in the solvent of choice. c-SAHA is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of c-SAHA in these solvents is approximately 5 mg/ml.

c-SAHA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, c-SAHA should first be dissolved in DMF and then diluted with the aqueous buffer of choice. c-SAHA has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

SAHA is a class I and class II histone deacetylase (HDAC) inhibitor that binds directly to the catalytic site of the enzyme thereby blocking substrate access.[1] c-SAHA is a SAHA derivative where the anilino 'cap' group is replaced by 7-amino-4-methylcoumarin to produce a fluorescent probe that competitively binds HDACs when tested against other HDAC inhibitors.[2] The fluorescence excitation and emission maxima of free c-SAHA is 325 and 400 nm, respectively and is quenched by 50% when bound to HDAC8.[2] This probe can be used to determine binding affinities and dissociation off-rates of HDAC enzyme-inhibitor complexes and is well-suited for high-throughput screening

### References


1. Marks, P.A. and Breslow, R. Dimethyl sulfoxide to vorinostat: Development of this histone deacetylase inhibitor as an anticancer drug. *Nat. Biotech.* **25(1)**, 84-90 (2007).
2. Singh, R.K., Mandal, T., Balasubramanian, N., *et al.* Coumarin-suberoylanilide hydroxamic acid as a fluorescent probe for determining binding affinities and off-rates of histone deacetylase inhibitors. *Anal. Biochem.* **408(2)**, 309-315 (2011).





**CAYMAN CHEMICAL**
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
**PHONE:** [800] 364-9897
[734] 971-3335
**FAX:** [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.**CAYMANCHEM**.COM