

Product Data Sheet

Product Name: coumarin-SAHA

Cat. No.: GC43318

Chemical Properties

Cas. No. 1260635-77-5

Chemical Name N1-hydroxy-N8-(4-methyl-2-oxo-2H-chromen-7-yl)-octanediamide

SMILES O=C(CCCCCC(=O)N)C1=CC2=C(C(C)=CC(=O)O)C=C1

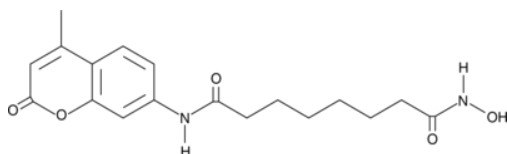
Formula C₁₈H₂₂N₂O₅ M.Wt 346.4

Solubility 5mg/mL in DMSO, 5mg/mL in DMF Storage Store at -20°C

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice. All other available size: ship with RT, or blue ice upon request.

Structure



Background

Suberoylanilide hydroxamic acid (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] coumarin-Suberoylanilide hydroxamic acid (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 HDAC. [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.

Reference:

[1]. Marks, P.A., and Breslow, R. Dimethyl sulfoxide to vorinostat: Development of this histone deacetylase inhibitor as an anticancer drug. Nat. Biotechnol. 25(1), 84-90 (2007).

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

Tel: (909) 407-4943 Fax: (626) 353-8530 E-mail: tech@glpbio.com

Address: 10292 Central Ave. #205, Montclair, CA, USA

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[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).

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