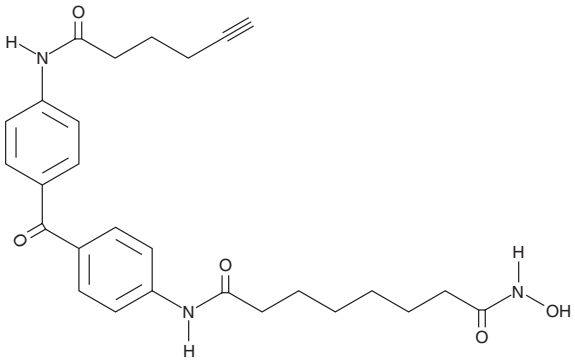
PRODUCT INFORMATION

SAHA-BPyne

Item No. 10675

CAS Registry No.:	930772-88-6
Formal Name:	N1-hydroxy-N8-[4-[4-[(1-oxo-5-hexyn-1-yl)amino]benzoyl]phenyl]-octanediamide
Synonyms:	Click Tag™ SAHA-BPyne, Suberoylanilide Hydroxamic Acid-BPyne
MF:	$C_{27}H_{31}N_3O_5$
FW:	477.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 231, 305 nm
Supplied as:	A solution in methanol
Storage:	-20°C
Stability:	≥2 years



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

Laboratory Procedures

SAHA-BPyne is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. DMSO purged with an inert gas can be used. The solubility of SAHA-BPyne in DMSO is approximately 5 mg/ml.

If aqueous stock solutions are required for biological experiments, they can best be prepared by diluting the organic solvent into aqueous buffers or isotonic saline. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

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] SAHA-BPyne is a SAHA derivative with a benzophenone crosslinker and an alkyne tag intended to be used for profiling HDAC activities in proteomes and live cells.[2,3] Such terminal alkyne groups can be used in linking reactions, known as 'Click Chemistry', characterized by high dependability and specificity of azide-alkyne bioconjugation reactions.[4,5] SAHA-BPyne labels HDAC complex proteins both in proteomes at 100 nM and in live cells at 500 nM and demonstrates an IC_{50} value of ~3 µM for inhibition of HDAC activity in HeLa cell nuclear lysates in an HDAC activity assay.[2]

References

1. Marks, P.A. and Breslow, R. *Nat. Biotech.* **25(1)**, 84-90 (2007).
2. Salisbury, C.M. and Cravatt, B.F. *J. Am. Chem. Soc.* **130**, 2184-2194 (2008).
3. Salisbury, C.M. and Cravatt, B.F. *Proc. Natl. Acad. Sci. USA* **104(4)**, 1171-6 (2011).
4. Kolb, H.C. and Sharpless, K.B. *Drug Discov. Today* **8(24)**, 1128-1137 (2003).
5. Lutz, J.-F. and Zarafshani, Z. *Adv. Drug Deliv. Rev.* **60**, 958-970 (2008).

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