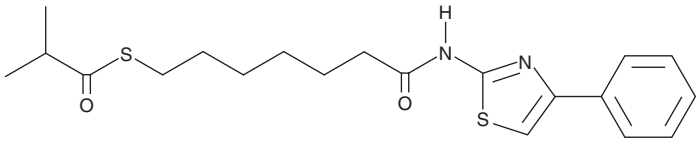
PRODUCT INFORMATION

NCH-51

Item No. 21234

CAS Registry No.:	848354-66-5
Formal Name:	S-[7-oxo-7-[(4-phenyl-2-thiazolyl)amino]heptyl] ester, 2-methyl-propanethioic acid
Synonym:	PTACH
MF:	$C_{20}H_{26}N_2O_2S_2$
FW:	390.6
Purity:	≥98%
UV/Vis.:	λ_{max}: 233, 269 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

NCH-51 is supplied as a crystalline solid. A stock solution may be made by dissolving the NCH-51 in the solvent of choice, which should be purged with an inert gas. NCH-51 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of NCH-51 in ethanol is approximately 10 mg/ml and approximately 30 mg/ml in DMSO and DMF.

NCH-51 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NCH-51 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NCH-51 has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

NCH-51 is an inhibitor of histone deacetylases (HDACs) with IC_{50} values of 48, 32, and 41 nM for HDAC1, 4, and 6, respectively.[1] It increases acetylation of histone H4 and α-tubulin in HCT116 cells when used at concentrations ranging from 1 to 25 µM and inhibits the growth of a variety of cancer cell lines (EC_{50}s = 1.1-9.1 µM).[2,3] NCH-51 (0.4-1.6 µM) also induces HIV-1 viral replication in OM10.1 and ACH-2 cells latently infected with HIV-1 when used alone and, to a greater effect, when used in the presence of TNF-α, with cytotoxic concentration (CC_{50}) values of approximately 2 µM for both cell lines.[1]

References

1. Victoriano, A.F.B., Imai, K., Togami, H., *et al.* Novel histone deacetylase inhibitor NCH-51 activates latent HIV-1 gene expression. *FEBS Lett.* **585(7)**, 1103-1111 (2011).
2. Suzuki, T., Kouketsu, A., Itoh, Y., *et al.* Highly potent and selective histone deacetylase 6 inhibitors designed based on a small-molecular substrate. *J. Med. Chem.* **49(16)**, 4809-4812 (2006).
3. Suzuki, T., Nagano, Y., Kouketsu, A., *et al.* Novel inhibitors of human histone deacetylases: Design, synthesis, enzyme inhibition, and cancer cell growth inhibition of SAHA-based non-hydroxamates. *J. Med. Chem.* **48(4)**, 1019-1032 (2005).

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