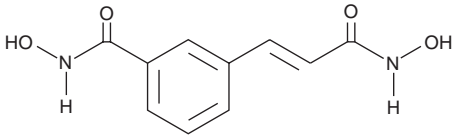
PRODUCT INFORMATION

CBHA

Item No. 13172

CAS Registry No.:	174664-65-4
Formal Name:	N-hydroxy-3-[3-(hydroxyamino)-3-oxo-1-propen-1-yl]-benzamide
Synonyms:	Histone Deacetylase Inhibitor II, *m*-Carboxycinnamic Acid *bis* Hydroxamide
MF:	$C_{10}H_{10}N_2O_4$
FW:	222.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 226, 271 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

CBHA is supplied as a crystalline solid. A stock solution may be made by dissolving the CBHA in the solvent of choice, which should be purged with an inert gas. CBHA is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CBHA in these solvents is approximately 25 and 20 mg/ml, respectively.

CBHA is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CBHA should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CBHA has a solubility of approximately 0.15 mg/ml in a 1:5 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Histone deacetylase (HDAC) inhibitors hyperacetylate histones and increase transcriptional activity in selected genes. Importantly, HDAC inhibitors induce apoptosis in some cancer cells and show promise in the treatment of certain forms of cancer. CBHA is a potent HDAC inhibitor, exhibiting ID_{50} values of 0.01 and 0.07 µM *in vitro* for HDAC1 and HDAC3, respectively.[1] CBHA also induces apoptosis in nine different neuroblastoma cell lines in culture (0.5-4.0 µM)[2] and completely suppresses neuroblastoma tumor growth in SCID mice at 200 mg/kg.[3] The efficacy of CBHA for suppressing tumor growth in mice is enhanced by the addition of retinoic acid.[3]

References

1. Richon, V.M., Emiliani, S., Verdin, E., *et al.* A class of hybrid polar inducers of transformed cell differentiation inhibits histone deacetylases. *Proc. Natl. Acad. Sci. USA* **95(6)**, 3003-3007 (1998).
2. Glick, R.D., Swendeman, S.L., Coffey, D.C., *et al.* Hybrid polar histone deacetylase inhibitor induces apoptosis and CD95/CD95 ligand expression in human neuroblastoma. *Cancer Res.* **59(17)**, 4392-4399 (1999).
3. Coffey, D.C., Kutko, M.C., Glick, R.D., *et al.* The histone deacetylase inhibitor, CBHA, inhibits growth of human neuroblastoma xenografts *in vivo*, alone and synergistically with *all-trans* retinoic acid. *Cancer Res.* **61(9)**, 3591-3594 (2001).

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