

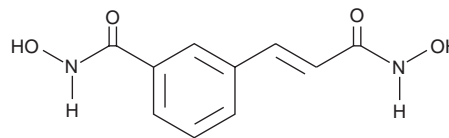
# PRODUCT INFORMATION



## 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<sub>10</sub>H<sub>10</sub>N<sub>2</sub>O<sub>4</sub>  
**FW:** 222.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 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<sub>50</sub> values of 0.01 and 0.07 μM *in vitro* for HDAC1 and HDAC3, respectively.<sup>1</sup> CBHA also induces apoptosis in nine different neuroblastoma cell lines in culture (0.5-4.0 μM)<sup>2</sup> and completely suppresses neuroblastoma tumor growth in SCID mice at 200 mg/kg.<sup>3</sup> The efficacy of CBHA for suppressing tumor growth in mice is enhanced by the addition of retinoic acid.<sup>3</sup>

### 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).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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