

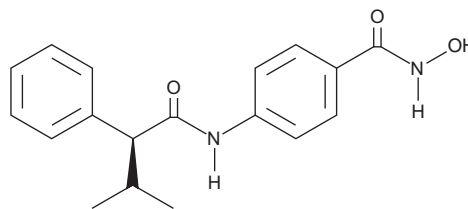
# Product Information



## (S)-HDAC-42

Item No. 13277

**CAS Registry No.:** 935881-37-1  
**Formal Name:** N-[4-[(hydroxyamino)carbonyl]phenyl]- $\alpha$ S-(1-methylethyl)-benzeneacetamide  
**Synonym:** AR42  
**MF:** C<sub>18</sub>H<sub>20</sub>N<sub>2</sub>O<sub>3</sub>  
**FW:** 312.4  
**Purity:**  $\geq$ 95%  
**Stability:**  $\geq$ 2 years at -20°C  
**Supplied as:** A crystalline solid



### Laboratory Procedures

For long term storage, we suggest that (S)-HDAC-42 be stored as supplied at -20°C. It should be stable for at least two years.

(S)-HDAC-42 is supplied as a crystalline solid. A stock solution may be made by dissolving the (S)-HDAC-42 in the solvent of choice. (S)-HDAC-42 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of (S)-HDAC-42 in these solvents is approximately 20 mg/ml.

(S)-HDAC-42 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, (S)-HDAC-42 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. (S)-HDAC-42 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.

The dysregulation of histone acetylation contributes to the pathogenesis of some cancers. Histone deacetylases (HDACs) which participate in regulating the acetylation status of nucleosomal histones are increasingly recognized as promising targets for cancer therapy. (S)-HDAC-42 is a potent inhibitor of HDACs (IC<sub>50</sub> = 16 nM *in vitro*).<sup>1</sup> It decreases the viability of prostate cancer cell lines (IC<sub>50</sub> = 0.40  $\mu$ M), increasing the expression of p21 and the acetylation of histone H3 while decreasing the phosphorylation of Akt and the expression of Bcl-XL.<sup>2</sup> (S)-HDAC-42 also strongly suppresses the growth of PC-3 tumor xenografts, reducing levels of phospho-Akt and Bcl-XL protein in tumors.<sup>2</sup>

### References

1. Lu, Q., Wang, D.-S., Chen, C.-S., *et al.* Structure-based optimization of phenylbutyrate-derived histone deacetylase inhibitors. *J. Med. Chem.* **48**, 5530-5535 (2005).
2. Kulp, S.K., Chen, C.-S., Wang, D.-S., *et al.* Anti-tumor effects of a novel phenylbutyrate-based histone deacetylase inhibitor, (S)-HDAC-42, in prostate cancer. *Clin. Cancer Res.* **12**(17), 5199-5206 (2006).

### Related Product

Tubastatin A (trifluoroacetate salt) - Item No. 10559 • CAY10603 - Item No. 13146 • CBHA - Item No. 13172 • M 344 - Item No. 13174 • Pimelic Diphenylamide 106 - Item No. 13212 • MS-275 - Item No. 13284 • HNHA - Item No. 13295 • Trichostatin A - Item No. 89730 • SAHA - Item No. 10009929

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**WARNING: THIS PRODUCT IS FOR LABORATORY RESEARCH ONLY: NOT FOR ADMINISTRATION TO HUMANS. NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

#### MATERIAL SAFETY DATA

This material should be considered hazardous until information to the contrary becomes available. Do not ingest, swallow, or inhale. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. This information contains some, but not all, of the information required for the safe and proper use of this material. Before use, the user must review the complete Material Safety Data Sheet, which has been sent *via* email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

Cayman Chemical Company makes **no warranty or guarantee** of any kind, whether written or oral, expressed or implied, including without limitation, any warranty of fitness for a particular purpose, suitability and merchantability, which extends beyond the description of the chemicals hereof. Cayman **warrants only** to the original customer that the material will **meet our specifications at the time of delivery.**

Cayman will carry out its delivery obligations with due care and skill. Thus, in no event will Cayman have **any obligation or liability**, whether in tort (including negligence) or in contract, for any direct, indirect, incidental or consequential damages, even if Cayman is informed about their possible existence.

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Said refund or replacement is conditioned on Buyer giving written notice to Cayman within thirty (30) days after arrival of the material at its destination. Failure of Buyer to give said notice within thirty (30) days shall constitute a waiver by Buyer of all claims hereunder with respect to said material.

For further details, please refer to our Warranty and Limitation of Remedy located on our website and in our catalog.

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