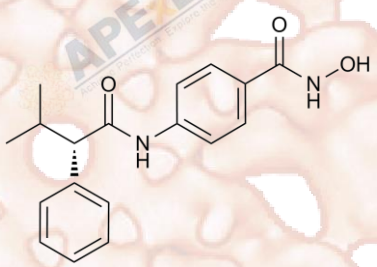
Product Data Sheet

# AR-42 (OSU-HDAC42)

**Cat. No.:** A4104
**CAS No.:** 935881-37-1
**Formula:** C18H20N2O3
**M.Wt:** 312.36
**Synonyms:**
**Target:** DNA Damage/DNA Repair
**Pathway:** HDAC
**Storage:** Store at -20°C



## Solvent & Solubility

insoluble in EtOH; insoluble in H2O; ⩾15.62 mg/mL in DMSO

In Vitro — Preparing Stock Solutions

| Solvent / Mass / Concentration | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.2014 mL | 16.0072 mL | 32.0143 mL |
| 5 mM | 0.6403 mL | 3.2014 mL | 6.4029 mL |
| 10 mM | 0.3201 mL | 1.6007 mL | 3.2014 mL |

Please refer to the solubility information to select the appropriate solvent.

## Biological Activity

| | |
|---|---|
| Shortsummary | HDAC inhibitor,novel and potent |
| $IC_{50}$ & Target | 30 nM (HDAC) |

In Vitro

**Cell Viability Assay**

| | |
|---|---|
| Cell Line: | DU-145 cells |
| Preparation method: | The solubility of this compound in DMSO is >10 mM. General tips for obtaining a higher concentration: Please warm the tube at 37 °C for 10 minutes and/or shake it in the ultrasonic bath for a while. Stock solution can be stored below -20 °C for several months. |
| Reacting conditions: | 10 ~ 1000 nM; 96 hrs |

| | | |
|---|---|---|
| | Applications: | AR-42 inhibited the growth of DU-145 cells with an IC50 value of 0.11 μM. |
| In Vivo | **Animal experiment** | |
| | Animal models: | Intact male NCr athymic nude mice inoculated s.c. with PC-3 cells |
| | Dosage form: | 25 mg/kg, q.d., or 50 mg/kg, q.o.d.; p.o.; for 28 days |
| | Applications: | At the doses of 25 mg and 50 mg, AR-42 inhibited the growth of PC-3 tumor xenografts by 52% and 67%, respectively. |
| | Other notes: | Please test the solubility of all compounds indoor, and the actual solubility may slightly differ with the theoretical value. This is caused by an experimental system error and it is normal. |

## Product Citations

1.Bagnall NH, Hines BM, et al."Insecticidal activities of histone deacetylase inhibitors against a dipteranparasite of sheep, Lucilia cuprina." Int J Parasitol Drugs Drug Resist. 2017Apr;7(1):51-60.PMID:28110187

2.Park, Jeenah, Scott Thomas, and Pamela N. Munster. "Epigenetic modulation with histone deacetylase inhibitors in combination with immunotherapy." Epigenomics 7.4 (2015): 641-652.PMID:26111034

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## References

[1]. Lu Q, Wang DS, Chen CS, Hu YD, Chen CS. Structure-based optimization of phenylbutyrate-derived histone deacetylase inhibitors. J Med Chem. 2005 Aug 25;48(17):5530-5.

[2]. Kulp SK, Chen CS, Wang DS, Chen CY, Chen CS. Antitumor effects of a novel phenylbutyrate-based histone deacetylase inhibitor, (S)-HDAC-42, in prostate cancer. Clin Cancer Res. 2006 Sep 1;12(17):5199-206.

## Caution

**FOR RESEARCH PURPOSES ONLY.**

**NOT FOR HUMAN, VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.**

*Specific storage and handling information for each product is indicated on the product datasheet. Most APExBIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Shortterm storage of many products are stable in the short-term at temperatures that differ from that required for long-term storage. We ensure that the product is shipped under conditions that will maintain the quality of the reagents. Upon receipt of the product, follow the storage recommendations on the product data sheet.*

**APExBIO Technology**
**www.apexbt.com**
7505 Fannin street, Suite 410, Houston, TX 77054.
Tel: +1-832-696-8203 | Fax: +1-832-641-3177 | Email: info@apexbt.com