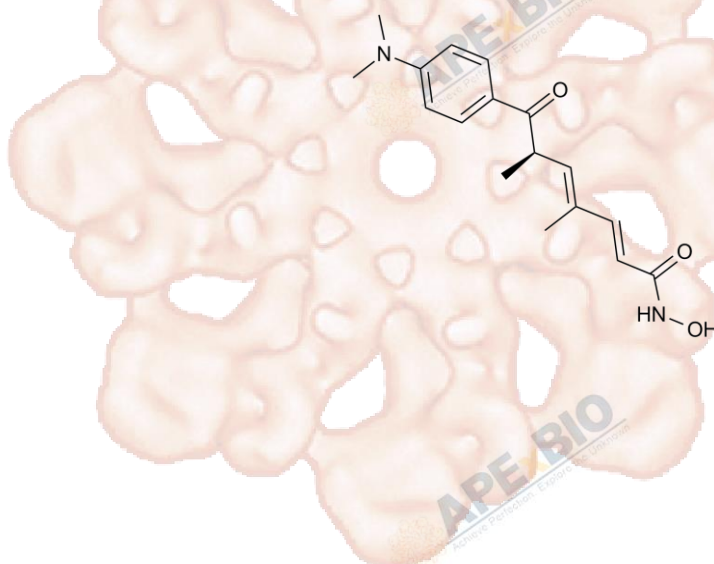


Product Data Sheet

Trichostatin A (TSA)

| | |
|------------------|---|
| Cat. No.: | A8183 |
| CAS No.: | 58880-19-6 |
| Formula: | C ₁₇ H ₂₂ N ₂ O ₃ |
| M.Wt: | 302.37 |
| Synonyms: | Trichostatin A, TSA |
| Target: | DNA Damage/DNA Repair |
| Pathway: | HDAC |
| Storage: | Desiccate at -20°C |



Solvent & Solubility

insoluble in H₂O; ≥15.12 mg/mL in DMSO; ≥16.56 mg/mL in EtOH with ultrasonic

In Vitro

| Preparing Stock Solutions | Solvent | Mass | 1mg | 5mg | 10mg |
|---------------------------|--------------|------|---------------|------------|------------|
| | | | Concentration | | |
| | 1 mM | | 3.3072 mL | 16.5360 mL | 33.0721 mL |
| | 5 mM | | 0.6614 mL | 3.3072 mL | 6.6144 mL |
| | 10 mM | | 0.3307 mL | 1.6536 mL | 3.3072 mL |

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

Biological Activity

Shortsummary

HDAC inhibitor

IC₅₀ & Target

~1.8 nM (HDAC)

In Vitro

Cell Viability Assay

| | |
|----------------------|---|
| Cell Line: | Human breast cancer cell line |
| Preparation method: | The solubility of this compound in DMSO is |
| Reacting conditions: | 10 μM TSA solved in growth medium containing 0.1% (v/v) ethanol for 96 h incubation |
| Applications: | TSA inhibited proliferation of eight breast carcinoma cell lines with mean ± SD |

| | | |
|---------|--------------------------|--|
| | | IC50 of 124.4 ± 120.4 nM (range, 26.4–308.1 nM). TSA treatment resulted in pronounced histone H4 hyperacetylation. |
| In Vivo | Animal experiment | |
| | Animal models: | Inbred virgin female (Ludwig/Wistar/Olac) rats bearing tumors induced with NMU |
| | Dosage form: | 500 µg/kg by injection daily for 4 weeks |
| | Applications: | TSA had pronounced antitumor activity in vivo. that The antitumor activity of TSA attributed to induction of differentiation. |
| | 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. Wang MH, Wu CH, et al. "Nerve-mediated expression of histone deacetylases regulates limb regeneration in axolotls." Dev Biol. 2019 May 15;449(2):122-131.PMID:30826398
2. Zheng Q, Liu P, et al. "Mitochondrion-processed TERC regulates senescence without affecting telomerase activities." Protein Cell. 2019 Feb 20.PMID:30788732
3. Deng R, Zhang P, et al. "HDAC is indispensable for IFN-γ-induced B7-H1 expression in gastric cancer." Clin Epigenetics. 2018 Dec 11;10(1):153.PMID:30537988
4. Ling H, Peng L, et al. "Histone Deacetylase SIRT1 Targets Plk2 to Regulate Centriole Duplication." Cell Rep. 2018 Dec 4;25(10):2851-2865.e3.PMID:30517871
5. Jiang H, Zhang S, et al. "Trichostatin a Protects Dendritic Cells Against Oxygen-Glucose Deprivation via the SRSF3/PKM2/Glycolytic Pathway." Front Pharmacol. 2018 Jun 11;9:612.PMID:29942258

See more customer validations on www.apexbt.com.

References

1. Vigushin DM1, Ali S, Pace PE et al. Trichostatin A is a histone deacetylase inhibitor with potent antitumor activity against breast cancer in vivo. Clin Cancer Res. 2001 Apr;7(4):971-6.

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 APEX BIO products are stable under the recommended conditions. Products are sometimes shipped at a temperature that differs from the recommended storage temperature. Short-term 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.



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