

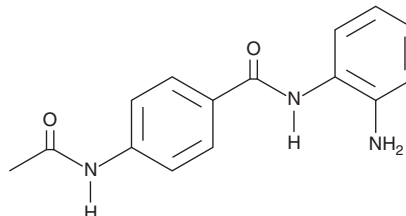
PRODUCT INFORMATION



CI-994

Item No. 12084

CAS Registry No.: 112522-64-2
Formal Name: 4-(acetylamino)-N-(2-aminophenyl)-benzamide
Synonyms: N-Acetyldinaline, Goe 5549, PD 123654, Tacedinaline
MF: C₁₅H₁₅N₃O₂
FW: 269.3
Purity: ≥98%
UV/Vis.: λ_{max}: 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

CI-994 is supplied as a crystalline solid. A stock solution may be made by dissolving the CI-994 in the solvent of choice, which should be purged with an inert gas. CI-994 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of CI-994 in these solvents is approximately 5 and 1 mg/ml, respectively.

CI-994 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CI-994 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CI-994 has a solubility of approximately 0.5 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

CI-994 is an inhibitor of histone deacetylase 1 (HDAC1), HDAC2, and HDAC3 (IC₅₀s = 0.9, 0.9, and 1.2 μM, respectively).¹ It is selective for these HDACs over HDAC8 (IC₅₀ = >20 μM). CI-994 inhibits the growth of HCT116 colon cancer cells but not human mammary epithelial cells (HMECs; IC₅₀s = 4 and >50 μM, respectively). *In vivo*, CI-994 (11.85 mg/kg twice per day) increases survival time in a rat model of 9,10-dimethyl-1,2-benzathracene-induced leukemia.² It reduces tumor growth in an LNCaP mouse xenograft model, as well as in a Panc02 murine pancreatic cancer model.³ CI-994 (1, 10, and 30 mg/kg) reduces neutrophil accumulation, inflammatory cytokine expression, and neuronal loss in a mouse model of spinal cord injury.⁴

References

1. Moradei, O.M., Mallais, T.C., Frechette, S., *et al.* Novel aminophenyl benzamide-type histone deacetylase inhibitors with enhanced potency and selectivity. *J. Med. Chem.* **50**(23), 5543-5546 (2007).
2. El-Beltagi, H.M., Martens, A.C.M., Lelieveld, P., *et al.* Acetyldinaline: A new oral cytostatic drug with impressive differential activity against leukemic cells and normal stem cells—preclinical studies in a relevant rat model for human acute myelocytic leukemia. *Cancer Res.* **53**(13), 3008-3014 (1993).
3. LoRusso, P.M., Demchik, L., Foster, B., *et al.* Preclinical antitumor activity of CI-994. *Invest. New Drugs* **14**(4), 349-356 (1996).
4. Zhang, S., Fujita, Y., Matsuzaki, R., *et al.* Class I histone deacetylase (HDAC) inhibitor CI-994 promotes functional recovery following spinal cord injury. *Cell Death Dis.* **9**(5), 460 (2018).

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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/22/2022

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