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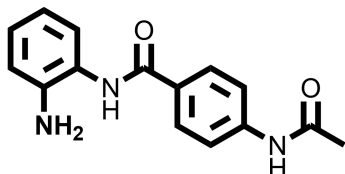
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HDAC Inhibitor – CI994 (Tacedinaline)

Chemical Name: 4-acetamido-N-(2-aminophenyl)benzamide



Molecular Weight:	269.30
Formula:	C ₁₅ H ₁₅ N ₃ O ₂
Purity:	≥98%
CAS#:	112522-64-2
Solubility:	DMSO up to 100 mM
Storage	Powder: 4 °C 1 year DMSO: 4 °C 3 months -20 °C 1 year

Biological Activity:

CI994 is a potent, selective and orally active histone deacetylase (HDAC) inhibitor. It inhibits HDAC1 (IC₅₀ ~0.57 μM), HDAC2 (IC₅₀ ~0.90 μM) and HDAC3 (IC₅₀ ~1.2 μM). It does not inhibit HDAC6 and HDAC8 (IC₅₀ >100 μM). CI994 mediates G1 cell cycle arrest, inhibits proliferation, and induces apoptosis in tumor cell lines. It has also demonstrated antitumor activity in several tumor models, including the chemo-resistant mouse pancreatic ductal carcinoma as well as the human prostate tumor model LNCaP. Currently CI994 is in phase III clinical trials for lung cancer. In recent publication CI994 could also epigenetically prime the hippocampal transcriptome for reinstated neuroplasticity and lead to increased neuroplasticity during memory extinction. This suggests applying HDACis during memory reconsolidation might constitute a treatment option for remote traumata.

How to Use:

In vitro: CI994 was used at 2.5-10 μM in vitro and cellular assays.

In vivo: CI994 was administered to mice via oral gavage (PO) or intraperitoneal injection (IP) at 5-35 mg/kg once per day.

Reference:

1. Kraker AJ, et al. Modulation of histone acetylation by [4-(acetylamino)-N-(2-amino-phenyl) benzamide] in HCT-8 colon carcinoma. (2003) *Mol Cancer Ther.* 2(4):401-8.
2. Loprevite M, et al. In vitro study of CI-994, a histone deacetylase inhibitor, in non-small cell lung cancer cell lines. (2005) *Oncol Res.* 15(1):39-48.
3. Beckers T, et al. Distinct pharmacological properties of second generation HDAC inhibitors with the benzamide or hydroxamate head group. (2007) *Int J Cancer.* 121(5):1138-48.
4. Gräff J, et al. Epigenetic priming of memory updating during reconsolidation to attenuate remote fear memories. (2014) *Cell.* 156(1-2):261-76.

Products are for research use only. Not for human use.