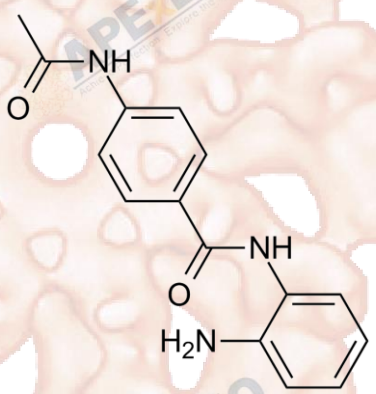
Product Data Sheet

CI994 (Tacedinaline)

Cat. No.: A4102
CAS No.: 112522-64-2
Formula: C15H15N3O2
M.Wt: 269.3
Synonyms:
Target: DNA Damage/DNA Repair
Pathway: HDAC
Storage: Store at -20°C



Solvent & Solubility

In Vitro

insoluble in H2O; insoluble in EtOH; ⩾50 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	3.7133 mL	18.5667 mL	37.1333 mL
5 mM	0.7427 mL	3.7133 mL	7.4267 mL
10 mM	0.3713 mL	1.8567 mL	3.7133 mL

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

Biological Activity

Shortsummary	HDAC inhibitor
IC_{50} & Target	0.57 μM (HDAC1)

In Vitro

Cell Viability Assay

Cell Line:	Peripheral blood lymphocytes
Preparation method：	The solubility of this compound in DMSO is ≥50mg/mL. 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 μM, 24 hours

	Applications:	No evidence of apoptosis or necrosis was detected in lymphocytes exposed to CI994 for 4 hours. After 24 hours, concentration-dependent increases in apoptosis characterized by DNA condensation, DNA fragmentation, and/or externalization of phosphatidyl serine were seen at CI-994 concentrations as low as 1 μM and were statistically significant beginning at 10 μM.
In Vivo	**Animal experiment**	
	Animal models:	Male Wistar rats
	Dosage form:	Oral administration, 45 mg/kg
	Applications:	15 rats per group were administered a single dose of CI994 at 0 (vehicle control), 10, 23, and 45 mg/kg. 5 rats per group were killed 1, 3, and 7 days after dosing for evaluation of blood and bone marrow lymphocyte counts. CI994 treatments resulted in significant dose-related reductions in total white blood cell counts, total lymphocytes and lymphocyte subpopulations. Relative to controls, reductions on day 1 ranged from 36 to 48% at 10 mg/kg, 65 to 76% at 23 mg/kg, and 74 to 87%at 45 mg/kg. Dose-related reductions in monocytes ranging from 54 to 89% were observed in all drug-treated groups on days 1 and 3. Besides that, significant dose-related reductions in bone marrow lymphoid cells ranged from 28 to 33% at 10 mg/kg, 63 to 69%at 23 mg/kg, and 80 to 87%at 45 mg/kg.
	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.Hari Prasad, Rajini Rao. "The Amyloid Clearance Defect in ApoE4 Astrocytes is Corrected by Epigenetic Restoration of NHE6." bioRxiv. 2018.January. 4

See more customer validations on www.apexbt.com.

References

[1] Graziano M J, Spoon T A, Cockrell E A, et al. Induction of apoptosis in rat peripheral blood lymphocytes by the anticancer drug CI-994 (acetyldinaline). BioMed Research International, 2001, 1(2): 52-61.

[2] Graziano M J, Galati A J, Walsh K M. Immunotoxicity of the anticancer drug CI-994 in rats: effects on lymphoid tissue. Archives of toxicology, 1999, 73(3): 168-174.

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.

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