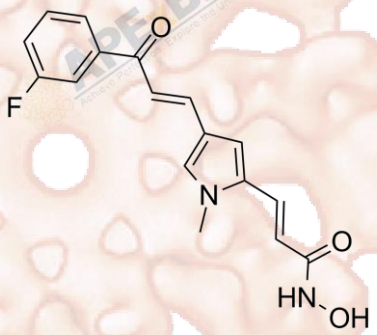
Product Data Sheet

MC1568



Cat. No.:	A4094
CAS No.:	852475-26-4
Formula:	C17H15FN2O3
M.Wt:	314.31
Synonyms:	MC 1568, MC-1568
Target:	DNA Damage/DNA Repair
Pathway:	HDAC
Storage:	Store at -20°C

Solvent & Solubility

In Vitro

insoluble in EtOH; insoluble in H2O; ⩾15.7 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	3.1816 mL	15.9079 mL	31.8157 mL
5 mM	0.6363 mL	3.1816 mL	6.3631 mL
10 mM	0.3182 mL	1.5908 mL	3.1816 mL

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

Biological Activity

Shortsummary	Class II HDAC inhibitor,potent and selective
IC_{50} & Target	100 nM (HD1-A (Maize)), 3400 nM (HD1-B (Maize))

In Vitro

Cell Viability Assay

Cell Line:	3T3-L1 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 μM; 8 days

	Applications:	In 3T3-L1 cells, MC1568 attenuated PPARγ-induced adipogenesis.
In Vivo	**Animal experiment**	
	Animal models:	PPRE-Luc transgenic C57BL/6 mice
	Dosage form:	50 mg/kg; p.o.; q.d., for 7 days
	Applications:	In PPRE-Luc transgenic C57BL/6 mice, MC1568 (50 mg/kg) impaired PPARγ signaling mostly in the heart and adipose tissues.
	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

2. Griffin EA Jr, Melas PA, et al. "Prior alcohol use enhancesvulnerability to compulsive cocaine self-administration by promoting degradationof HDAC4 and HDAC5." Sci Adv. 2017 Nov 1;3(11):e1701682.PMID:29109977

3. Ha, Soon-Duck, et al. "Inhibition of IL-1β Expression by Anthrax Lethal Toxin is Reversed by HDAC8 Inhibition in Murine Macrophages." Journal of Biological Chemistry (2016): jbc-M115.PMID:26912657

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References

[1]. Mai A, Massa S, Pezzi R, Simeoni S, Rotili D, Nebbioso A, Scognamiglio A, Altucci L, Loidl P, Brosch G. Class II (IIa)-selective histone deacetylase inhibitors. 1. Synthesis and biological evaluation of novel (aryloxopropenyl)pyrrolyl hydroxyamides. J Med Chem. 2005 May 5;48(9):3344-53.

[2]. Nebbioso A, Dell'Aversana C, Bugge A, Sarno R, Valente S, Rotili D, Manzo F, Teti D, Mandrup S, Ciana P, Maggi A, Mai A, Gronemeyer H, Altucci L. HDACs class II-selective inhibition alters nuclear receptor-dependent differentiation. J Mol Endocrinol. 2010 Oct;45(4):219-28.

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