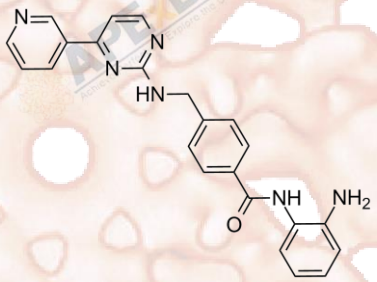
Product Data Sheet

Mocetinostat (MGCD0103, MG0103)

Cat. No.: A4089
CAS No.: 726169-73-9
Formula: C23H20N6O
M.Wt: 396.44
Synonyms: MGCD-0103
Target: DNA Damage/DNA Repair
Pathway: HDAC
Storage: Store at -20°C



Solvent & Solubility

In Vitro

insoluble in EtOH; insoluble in H2O; ⩾19.8 mg/mL in DMSO

Preparing Stock Solutions

Mass / Solvent / Concentration	1mg	5mg	10mg
1 mM	2.5224 mL	12.6122 mL	25.2245 mL
5 mM	0.5045 mL	2.5224 mL	5.0449 mL
10 mM	0.2522 mL	1.2612 mL	2.5224 mL

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

Biological Activity

Shortsummary	HDAC inhibitor,isotype-selective and potent
IC_{50} & Target	0.15 μM (HDAC1), 0.29 μM (HDAC2), 1.66 μM (HDAC3)

In Vitro

Cell Viability Assay

Cell Line:	A549 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:	50 μM, 16 hours

	Applications:	MGCD0103 showed dose-dependent inhibition of HDAC activity in whole cells. At high concentrations in A549 cells, MGCD0103 inhibited a maximum of 80% of total activity. Cells were then subsequently washed with drug-free media. The inhibitory activity of MGCD0103 was sustained at least 48 hours after drug removal followed by a slow reversal.
In Vivo	**Animal experiment**	
	Animal models:	Female CD-1 nude mice injected with A549 cells
	Dosage form:	Oral administration, 120 mg/kg
	Applications:	Administration of MGCD0103 (2HBr salt) significantly reduced growth of implanted advanced A549 tumors in nudemice in a dose-dependent manner after 13 days of daily administration. MGCD0103 (170 mg/kg for 2HBr salt, corresponding to 120 mg/kg of free base) significantly blocked growth of tumors compared with vehicle treatment alone with no change in body weight. In addition, MGCD0103 did not reduce WBC counts and was well tolerated.
	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.Topper MJ, Vaz M, et al. "Epigenetic Therapy Ties MYCDepletion to Reversing Immune Evasion and Treating Lung Cancer." Cell. 2017 Nov30;171(6):1284-1300.e21.PMID:29195073

2.Bagnall NH, Hines BM, et al."Insecticidal activities of histone deacetylase inhibitors against a dipteranparasite of sheep, Lucilia cuprina." Int J Parasitol Drugs Drug Resist. 2017Apr;7(1):51-60.PMID:28110187

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References

[1] Fournel M, Bonfils C, Hou Y, et al. MGCD0103, a novel isotype-selective histone deacetylase inhibitor, has broad spectrum antitumor activity in vitro and in vivo. Molecular Cancer Therapeutics, 2008, 7(4): 759-768.

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