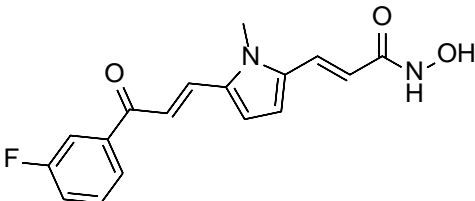


Product data sheet



MedKoo Cat#: 406487 Name: MC1568 CAS: 852475-26-4 Chemical Formula: C ₁₇ H ₁₅ FN ₂ O ₃ Exact Mass: 314.1067 Molecular Weight: 314.311	
Product supplied as: Powder	
Purity (by HPLC): ≥ 98%	
Shipping conditions: Ambient temperature	
Storage conditions: Powder: -20°C 3 years; 4°C 2 years.	
In solvent: -80°C 3 months; -20°C 2 weeks.	

1. Product description:

MC1568 is a class II-specific histone deacetylase inhibitor. MC1568 suppress IL-8 expression in human melanoma cells. Treatment of IEC-18 cells with specific inhibitors of class IIa HDACs, including MC1568, prevented cell cycle progression, DNA synthesis, and proliferation induced in response to G protein-coupled receptor/PKD1 activation.

2. CoA, QC data, SDS, and handling instruction

SDS and handling instruction, CoA with copies of QC data (NMR, HPLC and MS analytical spectra) can be downloaded from the product web page under “QC And Documents” section. Note: copies of analytical spectra may not be available if the product is being supplied by MedKoo partners. Whether the product was made by MedKoo or provided by its partners, the quality is 100% guaranteed.

3. Solubility data

Solvent	Max Conc. mg/mL	Max Conc. mM
DMF	0.5	1.59
DMSO	18.23	58.01
DMSO:PBS (pH 7.2) (1:2)	0.3	0.95

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.18 mL	15.91 mL	31.82 mL
5 mM	0.64 mL	3.18 mL	6.36 mL
10 mM	0.32 mL	1.59 mL	3.18 mL
50 mM	0.06 mL	0.32 mL	0.64 mL

5. Molarity Calculator, Reconstitution Calculator, Dilution Calculator

Please refer the product web page under section of “Calculator”

6. Recommended literature which reported protocols for in vitro and in vivo study

In vitro study

- Venza I, Visalli M, Oteri R, Cucinotta M, Teti D, Venza M. Class II-specific histone deacetylase inhibitors MC1568 and MC1575 suppress IL-8 expression in human melanoma cells. *Pigment Cell Melanoma Res.* 2013 Mar;26(2):193-204. doi: 10.1111/pcmr.12049. Epub 2013 Jan 7. Erratum in: *Pigment Cell Melanoma Res.* 2013 Sep;26(5):761. PMID: 23176534.
- 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. doi: 10.1677/JME-10-0043. Epub 2010 Jul 16. PMID: 20639404.

In vivo study

- Lenoir O, Flosseau K, Ma FX, Blondeau B, Mai A, Bassel-Duby R, Ravassard P, Olson EN, Haumaitre C, Scharfmann R. Specific control of pancreatic endocrine β - and δ -cell mass by class IIa histone deacetylases HDAC4, HDAC5, and HDAC9. *Diabetes.* 2011 Nov;60(11):2861-71. doi: 10.2337/db11-0440. Epub 2011 Sep 27. PMID: 21953612; PMCID: PMC3198089.
- Nebbioso A, Manzo F, Miceli M, Conte M, Manente L, Baldi A, De Luca A, Rotili D, Valente S, Mai A, Usiello A, Gronemeyer H, Altucci L. Selective class II HDAC inhibitors impair myogenesis by modulating the stability and activity of HDAC-MEF2 complexes.

Product data sheet



EMBO Rep. 2009 Jul;10(7):776-82. doi: 10.1038/embor.2009.88. Epub 2009 Jun 5. Erratum in: EMBO Rep. 2020 Dec 3;21(12):e51028. PMID: 19498465; PMCID: PMC2693879.

7. Bioactivity

Biological target:

MC1568 is a selective class II (IIa) histone deacetylase (HDAC II) inhibitor, used for cancer research.

In vitro activity

MC1568 and MC1575 inhibited IL-8 levels and cell proliferation in either unstimulated or PMA-stimulated melanoma cells.

Reference: Pigment Cell Melanoma Res. 2013 Mar;26(2):193-204. <https://pubmed.ncbi.nlm.nih.gov/23176534/>

In vivo activity

Analyses of the pancreas of class IIa HDAC mutant mice revealed an increased pool of insulin-producing β -cells in Hdac5(-/-) and Hdac9(-/-) mice and an increased pool of somatostatin-producing δ -cells in Hdac4(-/-) and Hdac5(-/-) mice. Treatment of pancreatic explants with the selective class IIa HDAC inhibitor MC1568 enhances expression of Pax4, a key factor required for proper β - and δ -cell differentiation and amplifies endocrine β - and δ -cells.

Reference: Diabetes. 2011 Nov;60(11):2861-71. <https://pubmed.ncbi.nlm.nih.gov/21953612/>

Note: The information listed here was extracted from literature. MedKoo has not independently retested and confirmed the accuracy of these methods. Customer should use it just for a reference only.