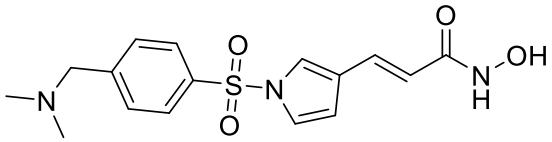
Product data sheet

MedKoo Cat#: 205787 Name: Resminostat CAS#: 864814-88-0 (free base) Chemical Formula: $C_{16}H_{19}N_3O_4S$ Exact Mass: 349.10963 Molecular Weight: 349.41	
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:
Resminostat, also known as 4S-201 and RAS2410, is an orally bioavailable inhibitor of histone deacetylases (HDACs) with potential antineoplastic activity. Resminostat binds to and inhibits HDACs leading to an accumulation of highly acetylated histones. This may result in an induction of chromatin remodeling, inhibition of the transcription of tumor suppressor genes, inhibition of tumor cell division and the induction of tumor cell apoptosis.

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
DMSO	70	200.34
Ethanol	70	200.34

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.86 mL	14.31 mL	28.62 mL
5 mM	0.57 mL	2.86 mL	5.72 mL
10 mM	0.29 mL	1.43 mL	2.86 mL
50 mM	0.06 mL	0.29 mL	0.57 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

1. Arai S, Takeuchi S, Fukuda K, Tanimoto A, Nishiyama A, Konishi H, Takagi A, Takahashi H, Ong ST, Yano S. Resminostat, a histone deacetylase inhibitor, circumvents tolerance to EGFR inhibitors in EGFR-mutated lung cancer cells with BIM deletion polymorphism. J Med Invest. 2020;67(3.4):343-350. doi: 10.2152/jmi.67.343. PMID: 33148913.
2. Palermo E, Acchioni C, Di Carlo D, Zevini A, Muscolini M, Ferrari M, Castiello L, Virtuoso S, Borsetti A, Antonelli G, Turriziani O, Sgarbanti M, Hiscott J. Activation of Latent HIV-1 T Cell Reservoirs with a Combination of Innate Immune and Epigenetic Regulators. J Virol. 2019 Oct 15;93(21):e01194-19. doi: 10.1128/JVI.01194-19. PMID: 31413127; PMCID: PMC6803272.

In vivo study

1. Ueno M, Morizane C, Furukawa M, Sakai D, Komatsu Y, Nakai Y, Tsuda M, Ozaka M, Mizuno N, Muto M, Fukutomi A, Ikeda M, Tsuji A, Katanuma A, Moriwaki T, Kajiwara T, Ishii H, Negoro Y, Shimizu S, Nemoto N, Kobayashi S, Makino K, Furuse J. A randomized, double-blind, phase II study of oral histone deacetylase inhibitor resminostat plus S-1 versus placebo plus S-1 in biliary tract cancers previously treated with gemcitabine plus platinum-based chemotherapy. Cancer Med. 2021 Mar;10(6):2088-2099. doi: 10.1002/cam4.3813. Epub 2021 Feb 26. PMID: 33635605; PMCID: PMC7957161.

2. Walewski J, Paszkiewicz-Kozik E, Borsaru G, Hellmann A, Janikova A, Warszewska A, Mais A, Ammendola A, Herz T, Krauss B, Henning SW. Resminostat in patients with relapsed or refractory Hodgkin lymphoma: results of the phase II SAPHIRE study. Leuk Lymphoma. 2019 Mar;60(3):675-684. doi: 10.1080/10428194.2018.1492122. Epub 2018 Aug 30. PMID: 30160566.

7. Bioactivity

Biological target:

Resminostat dose-dependently and selectively inhibits HDAC1/3/6 with IC50 of 42.5 nM/50.1 nM/71.8 nM. It is less potent to HDAC8 with IC50 of 877 nM.

In vitro activity

The combined use of resminostat and gefitinib increased BIMEL protein level in the non-small cell lung cancer cell line PC-9 and induced apoptosis, which led to remarkable shrinkage of tumor. These findings suggest the potential of resminostat to circumvent tolerance to EGFR-TKIs associated with BIM deletion polymorphism.

Reference: J Med Invest. 2020;67(3.4):343-350. https://pubmed.ncbi.nlm.nih.gov/33148913/

In vivo activity

Resminostat plus S-1 therapy did not improve progression-free survival nor overall survival for patients with pre-treated biliary tract cancers. Addition of resminostat to S-1 was associated with higher incidence of treatment-related adverse events.

Reference: Cancer Med. 2021 Mar;10(6):2088-2099. https://pubmed.ncbi.nlm.nih.gov/33635605/

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.