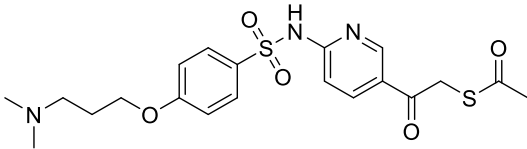


Product data sheet



MedKoo Cat#: 414221 Name: KD-5170 CAS: 940943-37-3 Chemical Formula: C ₂₀ H ₂₅ N ₃ O ₅ S ₂ Exact Mass: 451.1236 Molecular Weight: 451.556	
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:

KD-5170 is a histone deacetylase inhibitor.

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	1.0	2.21
DMSO	1.0	2.21
DMSO:PBS (pH 7.2) (1:1)	0.5	1.11

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.21 mL	11.07 mL	22.15 mL
5 mM	0.44 mL	2.21 mL	4.43 mL
10 mM	0.22 mL	1.11 mL	2.21 mL
50 mM	0.04 mL	0.22 mL	0.44 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. Feng R, Ma H, Hassig CA, Payne JE, Smith ND, Mapara MY, Hager JH, Lentzsch S. KD5170, a novel mercaptoketone-based histone deacetylase inhibitor, exerts antimyeloma effects by DNA damage and mitochondrial signaling. *Mol Cancer Ther.* 2008 Jun;7(6):1494-505. doi: 10.1158/1535-7163.MCT-08-0183. PMID: 18566220.

2. Hassig CA, Symons KT, Guo X, Nguyen PM, Annable T, Wash PL, Payne JE, Jenkins DA, Bonnefous C, Trotter C, Wang Y, Anzola JV, Milkova EL, Hoffman TZ, Dozier SJ, Wiley BM, Saven A, Malecha JW, Davis RL, Muhammad J, Shiao AK, Noble SA, Rao TS, Smith ND, Hager JH. KD5170, a novel mercaptoketone-based histone deacetylase inhibitor that exhibits broad spectrum antitumor activity in vitro and in vivo. *Mol Cancer Ther.* 2008 May;7(5):1054-65. doi: 10.1158/1535-7163.MCT-07-2347. PMID: 18483295.

In vivo study

1. Payne JE, Bonnefous C, Hassig CA, Symons KT, Guo X, Nguyen PM, Annable T, Wash PL, Hoffman TZ, Rao TS, Shiao AK, Malecha JW, Noble SA, Hager JH, Smith ND. Identification of KD5170: a novel mercaptoketone-based histone deacetylase inhibitor. *Bioorg Med Chem Lett.* 2008 Dec 1;18(23):6093-6. doi: 10.1016/j.bmcl.2008.10.029. Epub 2008 Oct 11. PMID: 18954983.

Product data sheet



2. Feng R, Ma H, Hassig CA, Payne JE, Smith ND, Mapara MY, Hager JH, Lentzsch S. KD5170, a novel mercaptoketone-based histone deacetylase inhibitor, exerts antimyeloma effects by DNA damage and mitochondrial signaling. *Mol Cancer Ther.* 2008 Jun;7(6):1494-505. doi: 10.1158/1535-7163.MCT-08-0183. PMID: 18566220.

7. Bioactivity

Biological target:

An inhibitor of class I and II HDACs.

In vitro activity

The lead compound, KD5170, exhibits HDAC inhibitory activity with an IC₅₀ of 0.045 micromol/L in the screening biochemical assay and an EC₅₀ of 0.025 micromol/L in HeLa cell-based assays that monitor histone H3 acetylation. KD5170 also exhibits broad spectrum classes I and II HDAC inhibition in assays using purified recombinant human isoforms. KD5170 shows significant antiproliferative activity against a variety of human tumor cell lines, including the NCI-60 panel.

Reference: *Mol Cancer Ther.* 2008 May;7(5):1054-65. <https://pubmed.ncbi.nlm.nih.gov/18483295/>

In vivo activity

Growth of myeloma tumor xenografts in KD5170-treated nude mice was significantly inhibited and survival was prolonged. Histone acetylation was increased in spleen and tumor tissues of animals treated with KD5170.

Reference: *Mol Cancer Ther.* 2008 Jun;7(6):1494-505. <https://pubmed.ncbi.nlm.nih.gov/18566220/>

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.