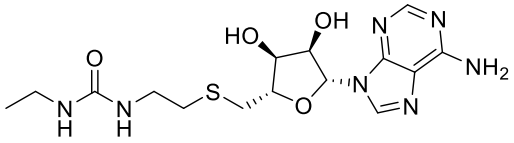
Product data sheet

MedKoo Cat#: 531767 Name: DS-437 CAS: 1674364-87-4 Chemical Formula: $C_{15}H_{23}N_7O_4S$ Exact Mass: 397.1532 Molecular Weight: 397.454	
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:
DS-437 is a dual PRMT5-PRMT7 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
DMSO	125.0	314.50

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.52 mL	12.58 mL	25.16 mL
5 mM	0.50 mL	2.52 mL	5.03 mL
10 mM	0.25 mL	1.26 mL	2.52 mL
50 mM	0.05 mL	0.25 mL	0.50 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. Smil D, Eram MS, Li F, Kennedy S, Szewczyk MM, Brown PJ, Barsyte-Lovejoy D, Arrowsmith CH, Vedadi M, Schapira M. Discovery of a Dual PRMT5-PRMT7 Inhibitor. ACS Med Chem Lett. 2015 Mar 2;6(4):408-12. doi: 10.1021/ml500467h. PMID: 25893041; PMCID: PMC4394339.

In vivo study

1. Ma T, Li L, Chen R, Yang L, Sun H, Du S, Xu X, Cao Z, Zhang X, Zhang L, Shi X, Liu JY. Protein arginine methyltransferase 7 modulates neuronal excitability by interacting with NaV1.9. Pain. 2022 Apr 1;163(4):753-764. doi: 10.1097/j.pain.0000000000002421. PMID: 34326297; PMCID: PMC8929296.
2. Nagai Y, Ji MQ, Zhu F, Xiao Y, Tanaka Y, Kambayashi T, Fujimoto S, Goldberg MM, Zhang H, Li B, Ohtani T, Greene MI. PRMT5 Associates With the FOXP3 Homomer and When Disabled Enhances Targeted p185erbB2/neu Tumor Immunotherapy. Front Immunol. 2019 Feb 8;10:174. doi: 10.3389/fimmu.2019.00174. PMID: 30800128; PMCID: PMC6375878.

7. Bioactivity
Biological target:
DS-437 is a dual PRMT5/7 inhibitor (IC50s of PRMT5/7=6 μM).

In vitro activity

Product data sheet

Using available structures of PRMT5, this study designed DS-437, a PRMT5 inhibitor with an IC50 value of 6 μM against both PRMT5 and PRMT7 that is inactive against 29 other human protein-, DNA-, and RNA-methyltransferases and inhibits symmetrical dimethylation of PRMT5 substrates in cells.

Reference: ACS Med Chem Lett. 2015 Mar 2;6(4):408-12. https://pubmed.ncbi.nlm.nih.gov/25893041/

In vivo activity

By contrast, a PRMT7 inhibitor (DS-437) reduced mNaV1.9 currents in Scn11a+/+ mice. DS-437 significantly inhibited the action potential frequency of DRG neurons and relieved pain hypersensitivity in Scn11aA796G/A796G mice.

Reference: Pain. 2022 Apr 1;163(4):753-764. https://pubmed.ncbi.nlm.nih.gov/34326297/

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.