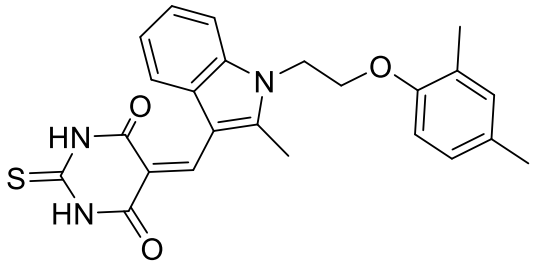
Product data sheet

MedKoo Cat#: 462439 Name: ZLDI-8 CAS: 667880-38-8 Chemical Formula: C24H23N3O3S Exact Mass: 433.1460 Molecular Weight: 433.53	
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:
ZLDI-8 is a Notch activating/cleaving enzyme ADAM-17 inhibitor and inhibits the cleavage of Notch protein. ZLDI-8 decreases the expression of pro-survival/anti-apoptosis and epithelial-mesenchymal transition (EMT) related proteins. ZLDI-8 is also a competitive and irreversible tyrosine phosphatase (Lyp) 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	62.5	144.17

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.31 mL	11.53 mL	23.07 mL
5 mM	0.46 mL	2.31 mL	4.61 mL
10 mM	0.23 mL	1.15 mL	2.31 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Lu H, Wu C, Jiang XW, Zhao Q. ZLDI-8 suppresses angiogenesis and vasculogenic mimicry in drug-resistant NSCLC in vitro and in vivo. Lung Cancer. 2023 Aug;182:107279. doi: 10.1016/j.lungcan.2023.107279. Epub 2023 Jun 14. PMID: 37364397.
2. Li DD, Zhao CH, Ding HW, Wu Q, Ren TS, Wang J, Chen CQ, Zhao QC. A novel inhibitor of ADAM17 sensitizes colorectal cancer cells to 5-Fluorouracil by reversing Notch and epithelial-mesenchymal transition in vitro and in vivo. Cell Prolif. 2018 Oct;51(5):e12480. doi: 10.1111/cpr.12480. Epub 2018 Aug 2. PMID: 30069943; PMCID: PMC6528951.

In vivo study

1. Lu HY, Chu HX, Tan YX, Qin XC, Liu MY, Li JD, Ren TS, Zhang YS, Zhao QC. Novel ADAM-17 inhibitor ZLDI-8 inhibits the metastasis of hepatocellular carcinoma by reversing epithelial-mesenchymal transition in vitro and in vivo. Life Sci. 2020 Mar 1;244:117343. doi: 10.1016/j.lfs.2020.117343. Epub 2020 Jan 21. PMID: 31978449.
2. Lu HY, Zu YX, Jiang XW, Sun XT, Liu TY, Li RL, Wu Q, Zhang YS, Zhao QC. Novel ADAM-17 inhibitor ZLDI-8 inhibits the proliferation and metastasis of chemo-resistant non-small-cell lung cancer by reversing Notch and epithelial mesenchymal transition in vitro and in vivo. Pharmacol Res. 2019 Oct;148:104406. doi: 10.1016/j.phrs.2019.104406. Epub 2019 Aug 20. PMID: 31442576.

7. Bioactivity

Product data sheet

Biological target:

ZLDI-8 is also a competitive and irreversible tyrosine phosphatase (Lyp) inhibitor with an IC50 of 31.6 μM and a Ki of 26.22 μM. ZLDI-8 inhibits the growth of MHCC97-H cells with an IC50 of 5.32 μM.

In vitro activity

ZLDI-8 is a potential candidate for improving colorectal cancer (CRC) treatment outcomes. ZLDI-8 demonstrated specific inhibition of CRC cell proliferation by targeting ADAM17 and the Notch pathway. ZLDI-8 showed promising potential as a chemosensitizer, enhancing the anti-tumor and anti-metastasis effects of chemotherapy drugs, such as 5-fluorouracil and irinotecan, by reversing Notch and epithelial-mesenchymal transition (EMT) pathways.

Reference: Cell Prolif. 2018 Oct;51(5):e12480. https://pubmed.ncbi.nlm.nih.gov/30069943/

In vivo activity

ZLDI-8 has potential as an effective agent in the treatment of drug-resistant lung cancer. ZLDI-8 suppressed multidrug-resistant lung cancer xenograft growth and blocks metastasis in a tail vein injection mice model.

Reference: Pharmacol Res. 2019 Oct;148:104406. https://pubmed.ncbi.nlm.nih.gov/31442576/

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.