

Product data sheet



MedKoo Cat#: 555650 Name: MELK-8a HCl CAS: 2096992-20-8 (HCl) Chemical Formula: C ₂₅ H ₃₃ ClN ₆ O Molecular Weight: 469.03		
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:

MELK-8a is a maternal embryonic leucine zipper kinase (MELK) 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	8.6	18.34
PBS (pH 7.2)	1.0	2.13
Water	100.0	213.21

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.13 mL	10.66 mL	21.32 mL
5 mM	0.43 mL	2.13 mL	4.26 mL
10 mM	0.21 mL	1.07 mL	2.13 mL
50 mM	0.04 mL	0.21 mL	0.43 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

- Sun H, Ma H, Zhang H, Ji M. Up-regulation of MELK by E2F1 promotes the proliferation in cervical cancer cells. *Int J Biol Sci.* 2021 Sep 7;17(14):3875-3888. doi: 10.7150/ijbs.62517. PMID: 34671205; PMCID: PMC8495384.
- Touré BB, Giraldez J, Smith T, Sprague ER, Wang Y, Mathieu S, Chen Z, Mishina Y, Feng Y, Yan-Neale Y, Shakya S, Chen D, Meyer M, Puleo D, Brazell JT, Straub C, Sage D, Wright K, Yuan Y, Chen X, Duca J, Kim S, Tian L, Martin E, Hurov K, Shao W. Toward the Validation of Maternal Embryonic Leucine Zipper Kinase: Discovery, Optimization of Highly Potent and Selective Inhibitors, and Preliminary Biology Insight. *J Med Chem.* 2016 May 26;59(10):4711-23. doi: 10.1021/acs.jmedchem.6b00052. Epub 2016 May 17. PMID: 27187609.

In vivo study

TBD

7. Bioactivity

Biological target:

MELK-8a hydrochloride is a novel maternal embryonic leucine zipper kinase (MELK) inhibitor with an IC₅₀ of 2 nM.

In vitro activity

Product data sheet



This study describes the discovery and optimization of novel MELK inhibitors 8a and 8b that recapitulate the cellular effects observed by short hairpin ribonucleic acid (shRNA)-mediated MELK knockdown in cellular models.

Reference: J Med Chem. 2016 May 26;59(10):4711-23. <https://pubmed.ncbi.nlm.nih.gov/27187609/>

In vivo activity

TBD

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.