

# Product data sheet



MedKoo Cat#: 563728 Name: IU1-47 CAS: 670270-31-2 Chemical Formula: C <sub>19</sub> H <sub>23</sub> ClN <sub>2</sub> O Exact Mass: 330.1499 Molecular Weight: 330.856	
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:

IU1-47 is a potent and selective inhibitor of USP14.

## 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	9.99	30.19

## 4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.02 mL	15.11 mL	30.23 mL
5 mM	0.60 mL	3.02 mL	6.05 mL
10 mM	0.30 mL	1.51 mL	3.02 mL
50 mM	0.06 mL	0.30 mL	0.60 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. Moghadami AA, Aboutaleb Vand Beilankouhi E, Kalantary-Charvadeh A, Hamzavi M, Mosayyebi B, Sedghi H, Ghorbani Haghjo A, Nazari Soltan Ahmad S. Inhibition of USP14 induces ER stress-mediated autophagy without apoptosis in lung cancer cell line A549. *Cell Stress Chaperones*. 2020 Nov;25(6):909-917. doi: 10.1007/s12192-020-01125-w. Epub 2020 Jul 6. PMID: 32632734; PMCID: PMC7591669.
2. Han KH, Kwak M, Lee TH, Park MS, Jeong IH, Kim MJ, Jin JO, Lee PC. USP14 Inhibition Regulates Tumorigenesis by Inducing Autophagy in Lung Cancer In Vitro. *Int J Mol Sci*. 2019 Oct 24;20(21):5300. doi: 10.3390/ijms20215300. PMID: 31653087; PMCID: PMC6862215.

In vivo study

TBD

## 7. Bioactivity

Biological target:

IU1-47 is a potent and specific USP14 inhibitor with an IC<sub>50</sub> of 0.6 μM. IU1-47 inhibits IsoT/USP5 with an IC<sub>50</sub> of 20 μM.

In vitro activity

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Similarly, compared with DMSO-treated cells, the IU1-47-treated cells markedly reduced both cell viability and proliferation rate of A549 cells in a dose-dependent manner (Fig. 1d, e). These data suggest that the proliferation of A549 cells is associated with USP14 inhibition.

Reference: Cell Stress Chaperones. 2020 Nov;25(6):909-917. <https://pubmed.ncbi.nlm.nih.gov/32632734/>

In vivo activity

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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.*