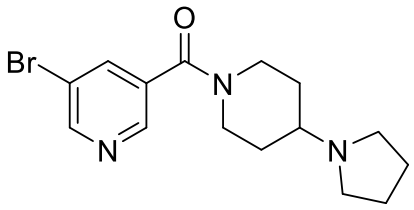
Product data sheet

MedKoo Cat#: 406494 Name: UNC-669 CAS#: 314241-44-5 Chemical Formula: $C_{15}H_{20}BrN_3O$ Exact Mass: 337.07897 Molecular Weight: 338.2428	
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:
UNC-669 is a L3MBTL domain inhibitor. UNC669 specifically targets lethal 3 malignant brain tumour-like protein (L3MBTL) with an IC50 of 5 μM.

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	11.0	32.52
Ethanol	68.0	201.04

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.96 mL	14.78 mL	29.56 mL
5 mM	0.59 mL	2.96 mL	5.91 mL
10 mM	0.30 mL	1.48 mL	2.96 mL
50 mM	0.06 mL	0.30 mL	0.59 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. Wang Q, Yu M, Ma Y, Zhang X, Zhang H, Li S, Lan R, Lu F. PHF20L1 antagonizes SOX2 proteolysis triggered by the MLL1/WDR5 complexes. Lab Invest. 2018 Dec;98(12):1627-1641. doi: 10.1038/s41374-018-0106-8. Epub 2018 Aug 8. PMID: 30089852.
2. Zhou H, Che X, Bao G, Wang N, Peng L, Barnash KD, Frye SV, James LI, Bai X. Design, synthesis, and protein methyltransferase activity of a unique set of constrained amine containing compounds. Bioorg Med Chem Lett. 2016 Sep 15;26(18):4436-4440. doi: 10.1016/j.bmcl.2016.08.004. Epub 2016 Aug 3. PMID: 27528434; PMCID: PMC4996710.

In vivo study

TBD

7. Bioactivity
Biological target:

UNC669 is a potent and selective MBT (malignant brain tumor) inhibitor with IC50 of 6 μM for L3MBTL1, 5- and 11-fold selective over L3MBTL3 and L3MBTL4.

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In vitro activity

Inhibiting the MBT domain of PHF20L1 with small chemicals UNC1215 and UNC669 destabilized SOX2. PA-1 cells were incubated with UNC1215 or UNC669 for 24 h and then further treated with either DMSO or MG-132 for 4 h. Densitometry measurements illustrating the relative protein levels of SOX2 and PHF20L1, normalized to Cullin-1, were plotted (right panels). UNC1215 and UNC669 treatments did not affect the mRNA level of SOX2. Quantitative real-time PCR was performed to measure the mRNA level of SOX2 upon UNC1215 or UNC669 treatments. Results were normalized to β-actin. Treatment with UNC1215 or UNC669 shortened the half-life of SOX2 protein. PA-1 cells were incubated with 40 μM UNC1215, UNC669, or DMSO for 24 h, and followed by CHX treatment as indicated. The relative protein levels of SOX2 and PHF20L1 were densitometry quantified using Gel Image analysis software and plotted. The data were represented as mean ± SD

Reference: Lab Invest. 2018 Dec;98(12):1627-1641. https://www.nature.com/articles/s41374-018-0106-8

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.