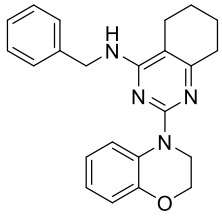
Product data sheet

MedKoo Cat#: 406621 Name: ML241 free base CAS#: 1346528-06-0 (free base) Chemical Formula: $C_{23}H_{24}N_4O$ Exact Mass: 372.19501 Molecular Weight: 372.46286	
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:
ML241 is a potent and selective inhibitors of p97 ATPase. ML241 inhibit p97 ATPase with IC(50) values of 100 nM. ML241 inhibits degradation of a p97-dependent but not a p97-independent proteasome substrate in a dual-reporter cell line. ML241 may be a novel agent for the chemotherapy of cancer, and provide a rationale for developing pathway-specific p97 inhibitors.

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
N/A	N/A	N/A

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.68 mL	13.42 mL	26.85 mL
5 mM	0.54 mL	2.68 mL	5.37 mL
10 mM	0.27 mL	1.34 mL	2.68 mL
50 mM	0.05 mL	0.27 mL	0.54 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. Chou TF, Li K, Frankowski KJ, Schoenen FJ, Deshaies RJ. Structure-activity relationship study reveals ML240 and ML241 as potent and selective inhibitors of p97 ATPase. ChemMedChem. 2013 Feb;8(2):297-312. doi: 10.1002/cmdc.201200520. Epub 2013 Jan 11. PMID: 23316025; PMCID: PMC3662613.
2. Fang CJ, Gui L, Zhang X, Moen DR, Li K, Frankowski KJ, Lin HJ, Schoenen FJ, Chou TF. Evaluating p97 inhibitor analogues for their domain selectivity and potency against the p97-p47 complex. ChemMedChem. 2015 Jan;10(1):52-6. doi: 10.1002/cmdc.201402420. Epub 2014 Nov 6. PMID: 25377500; PMCID: PMC4280364.

In vivo study

N/A

7. Bioactivity
Biological target:

N/A

In vitro activity

Product data sheet

Consistent with the role of p97 in the ubiquitin–proteasome system (UPS), ML240 and ML241, like the parent compound DBeQ, caused accumulation of ubiquitin conjugates in the nuclear plus membrane and cytosolic compartments at concentrations of 5–10 μm (Figure 4a). Interestingly, ML241 caused stronger accumulation than ML240, even though ML240 was more potent at stabilizing UbG76V–GFP. This, along with the cell proliferation data, points to unexpected complexity in the mechanism of action of these compounds.

Reference: ChemMedChem. 2013 Feb; 8(2): 297–312. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3662613/

In vivo activity

N/A

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.