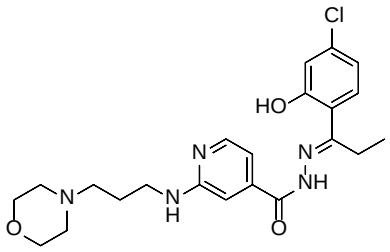
Product data sheet

MedKoo Cat#: 558399 Name: M-110 CAS: 1395048-49-3 Chemical Formula: $C_{22}H_{28}ClN_5O_3$ Exact Mass: 445.1881 Molecular Weight: 445.948	
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:
M-110 is a inhibitor of protein arginine N-methyltransferases (PRMTs). It is also a highly isoform-selective, cell permeable and potent ATP-competitive inhibitor of the PIM kinase family that prefers PIM-3, shown to inhibit the proliferation of prostate cancer cell lines with IC50s between 0.6 to 0.9 μM, with no activity on normal human peripheral blood mononuclear cells up to 40 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	33.33	74.74

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.24 mL	11.21 mL	22.42 mL
5 mM	0.45 mL	2.24 mL	4.48 mL
10 mM	0.22 mL	1.12 mL	2.24 mL
50 mM	0.05 mL	0.22 mL	0.45 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

Chang M, Kanwar N, Feng E, Siu A, Liu X, Ma D, Jongstra J. PIM kinase inhibitors downregulate STAT3(Tyr705) phosphorylation. Mol Cancer Ther. 2010 Sep;9(9):2478-87. doi: 10.1158/1535-7163.MCT-10-0321. Epub 2010 Jul 28. PMID: 20667852.

In vivo study

TBD

7. Bioactivity
Biological target:

M-110 is a highly selective, ATP-competitive inhibitor of PIM kinases with a preference for PIM-3 (IC_{50}=47 nM).

In vitro activity

Introduction of structural modifications yielded compound M-110, which inhibits the proliferation of prostate cancer cell lines with IC(50)s of 0.6 to 0.9 μmol/L, with no activity on normal human peripheral blood mononuclear cells up to 40 μmol/L. Screening of 261 recombinant kinases and subsequent analysis revealed that M-110 is a selective inhibitor of the PIM kinase family, with preference for PIM-3. Treatment of DU-145 cells with M-110 or with a structurally unrelated PIM inhibitor, SGI-1776, significantly reduces

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pSTAT3(Tyr705) expression without affecting the expression of STAT3. Furthermore, treatment of DU-145 cells with M-110 attenuates the interleukin-6-induced increase in pSTAT3(Tyr705).

Reference: Mol Cancer Ther. 2010 Sep;9(9):2478-87. https://pubmed.ncbi.nlm.nih.gov/20667852/

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.