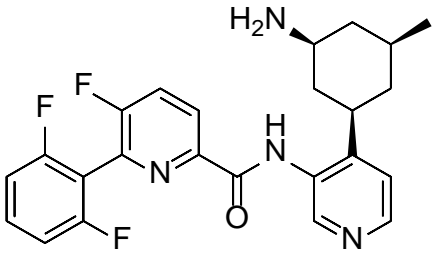


Product data sheet



MedKoo Cat#: 407201 Name: LGH447 free base CAS: 1210608-43-7 (free base) Chemical Formula: C ₂₄ H ₂₃ F ₃ N ₄ O Exact Mass: 440.1824 Molecular Weight: 440.4702	
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:

PIM447, also known as LGH447, is a potent Moloney murine leukemia (PIM) 1, 2, and 3 kinase inhibitor. Pan proviral insertion site of Moloney murine leukemia (PIM) 1, 2, and 3 kinase inhibitors have recently begun to be tested in humans to assess whether pan PIM kinase inhibition may provide benefit to cancer patients. PIM447 demonstrates in vivo target modulation (pS6RP), single agent antitumor activity in a KG-1 AML mouse xenograft model, and druglike properties suitable for development. PIM447 advanced into humans in 2012 and is currently being assessed in several phase I trials.

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	88.0	199.79
Ethanol	88.0	199.79

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.27 mL	11.35 mL	22.70 mL
5 mM	0.45 mL	2.27 mL	4.54 mL
10 mM	0.23 mL	1.14 mL	2.27 mL
50 mM	0.05 mL	0.23 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

1. Wadhvani N, Markert HR, Marayati R, Bownes LV, Quinn CH, Aye JM, Stewart JE, Yoon KJ, Beierle EA. PIM447 inhibits oncogenesis and potentiates cisplatin effects in hepatoblastoma. *J Pediatr Surg.* 2021 Jun;56(6):1157-1164. doi: 10.1016/j.jpedsurg.2021.02.039. Epub 2021 Feb 24. PMID: 33762119; PMCID: PMC8131223.
2. Leung MS, Chan KK, Dai WJ, Wong CY, Au KY, Wong PY, Wong CC, Lee TK, Ng IO, Kao WJ, Lo RC. Anti-tumour effects of PIM kinase inhibition on progression and chemoresistance of hepatocellular carcinoma. *J Pathol.* 2020 Sep;252(1):65-76. doi: 10.1002/path.5492. Epub 2020 Jul 31. PMID: 32558942.

In vivo study

1. Paíno T, Garcia-Gomez A, González-Méndez L, San-Segundo L, Hernández-García S, López-Iglesias AA, Algarín EM, Martín-Sánchez M, Corbacho D, Ortiz-de-Solorzano C, Corchete LA, Gutiérrez NC, Maetos MV, Garayoa M, Ocio EM. The Novel Pan-PIM Kinase Inhibitor, PIM447, Displays Dual Antimyeloma and Bone-Protective Effects, and Potently Synergizes with Current Standards of Care. *Clin Cancer Res.* 2017 Jan 1;23(1):225-238. doi: 10.1158/1078-0432.CCR-16-0230. Epub 2016 Jul 20. PMID: 27440267.

Product data sheet



7. Bioactivity

Biological target:

PIM447 (LGH447) is a potent, orally available, and selective pan-PIM kinase inhibitor, with K_i values of 6, 18, and 9 μM for PIM1, PIM2, and PIM3, respectively.

In vitro activity

PIM447 significantly decreased the viability, proliferation, and motility of HuH6 and COA67 cells. Apoptosis significantly increased following PIM447 treatment. PIM447 had a significant impact on tumor cell stemness as evidenced by decreased expression of CD133 and reduced ability of HuH6 and COA67 cells to form tumorspheres.

Reference: J Pediatr Surg. 2021 Jun;56(6):1157-1164. <https://pubmed.ncbi.nlm.nih.gov/33762119/>

In vivo activity

Finally, PIM447 significantly reduced the tumor burden and prevented tumor-associated bone loss in a disseminated murine model of human myeloma.

Reference: Clin Cancer Res. 2017 Jan 1;23(1):225-238. <https://pubmed.ncbi.nlm.nih.gov/27440267/>

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.