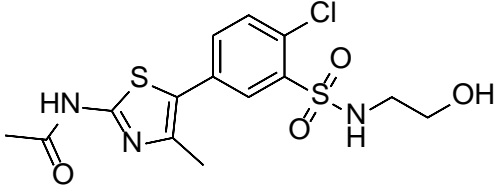


Product data sheet



MedKoo Cat#: 406325 Name: PIK-93 CAS: 593960-11-3 Chemical Formula: C ₁₄ H ₁₆ ClN ₃ O ₄ S ₂ Exact Mass: 389.0271 Molecular Weight: 389.869	
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:

PIK-93 is a potent PI3K inhibitor. PIK93 selectively inhibits the type III PI 4-kinase beta enzyme, and small interfering RNA-mediated down-regulation of the individual PI 4-kinase enzymes, revealed that PI 4-kinase beta has a dominant role in ceramide transport between the ER and Golgi.

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
DMF	5.0	12.82
DMSO	61.0	156.46
Ethanol	0.63	1.60

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.56 mL	12.82 mL	25.65 mL
5 mM	0.51 mL	2.56 mL	5.13 mL
10 mM	0.26 mL	1.28 mL	2.56 mL
50 mM	0.05 mL	0.26 mL	1.28 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. Lin CY, Huang KY, Kao SH, Lin MS, Lin CC, Yang SC, Chung WC, Chang YH, Chein RJ, Yang PC. Small-molecule PIK-93 modulates the tumor microenvironment to improve immune checkpoint blockade response. *Sci Adv.* 2023 Apr 7;9(14):eade9944. doi: 10.1126/sciadv.ade9944. Epub 2023 Apr 7. PMID: 37027467; PMCID: PMC10081850.
2. Hanes CM, D'Amico AE, Ueyama T, Wong AC, Zhang X, Hynes WF, Barroso MM, Cady NC, Trebak M, Saito N, Lennartz MR. Golgi-Associated Protein Kinase C-ε Is Delivered to Phagocytic Cups: Role of Phosphatidylinositol 4-Phosphate. *J Immunol.* 2017 Jul 1;199(1):271-277. doi: 10.4049/jimmunol.1700243. Epub 2017 May 24. PMID: 28539432; PMCID: PMC5505341.

In vivo study

1. Zhang W, Colavita A, Ngsee JK. Mitigating Motor Neuronal Loss in *C. elegans* Model of ALS8. *Sci Rep.* 2017 Sep 14;7(1):11582. doi: 10.1038/s41598-017-11798-6. PMID: 28912432; PMCID: PMC5599522.

7. Bioactivity

Biological target:

Product data sheet



PIK-93 is the first potent, synthetic PI4K (PI4KIII β) inhibitor with IC₅₀ of 19 nM, and also inhibits PI3K γ and PI3K α with IC₅₀ of 16 nM and 39 nM.

In vitro activity

This study aimed to discover small-molecule drugs that can modulate the TME to enhance ICI treatment efficacy in NSCLC in vitro and in vivo. This study identified a PD-L1 protein-modulating small molecule, PIK-93, using a cell-based global protein stability (GPS) screening system. PIK-93 mediated PD-L1 ubiquitination by enhancing the PD-L1-Cullin-4A interaction. PIK-93 reduced PD-L1 levels on M1 macrophages and enhanced M1 antitumor cytotoxicity.

Reference: Sci Adv. 2023 Apr 7;9(14):eade9944. <https://pubmed.ncbi.nlm.nih.gov/37027467/>

In vivo activity

When given to *vpr-1* knockdown worms, PIK-93 significantly reduced the frequency of worms with DA neuronal loss from Day 6 to 10 (Fig. 7b). Worms treated with PIK-93 exhibited significantly lower instances of DA neuronal loss at Day 6 and Day 10 (15.0% \pm 2.2% and 33.7% \pm 2.9%, respectively, $p < 0.001$) when compared to mock treated control (27.3% \pm 2.7% and 44.9% \pm 3.2% at Day 6 and Day 10, respectively, $p < 0.001$). The inhibitor had no effect on DB neuron survival. Together, this indicates that inhibiting PtdIns 4-kinase activity reduced the frequency of DA neuronal loss caused by the knockdown of *vpr-1* in these neurons.

Reference: Sci Rep. 2017 Sep 14;7(1):11582. <https://pubmed.ncbi.nlm.nih.gov/28912432/>

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.