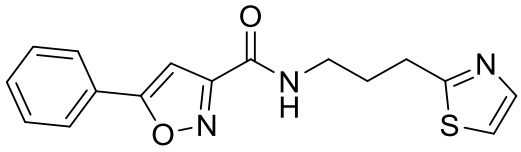
Product data sheet

MedKoo Cat#: 465543 Name: PY-60 CAS#: 2765218-56-0 Chemical Formula: $C_{16}H_{15}N_3O_2S$ Exact Mass: 313.0885 Molecular Weight: 313.38	
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:

PY-60 is a novel activator of YAP, promoting expansion of epidermal keratinocytes ex vivo and in vivo, targeting ANXA2 to activate YAP, activating a robust, YAP-dependent transcriptional program in multiple cell types. Chemical proteomics revealed the relevant target of PY-60 to be annexin A2 (ANXA2), a protein that directly associates with YAP at the cell membrane in response to increased cell density. PY-60 treatment liberates ANXA2 from the membrane, ultimately promoting a phosphatase-bound, nonphosphorylated and transcriptionally active form of YAP.

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	100	319.11

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	3.19 mL	15.96 mL	31.91 mL
5 mM	0.64 mL	3.19 mL	6.38 mL
10 mM	0.32 mL	1.60 mL	3.19 mL
50 mM	0.06 mL	0.32 mL	0.64 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. Chen J, Su X, Tan Q, Pu H, Zhang L, Kang Y, Tang Y, Zhao X, Hou W, Qian S, Deng S, Hou L, Gao Y. Effect of cell density on the malignant biological behavior of breast cancer by altering the subcellular localization of ANXA2 and its clinical implications. Clin Transl Oncol. 2022 Nov;24(11):2136-2145. doi: 10.1007/s12094-022-02865-0. Epub 2022 Jul 1. PMID: 35778647.
2. Shalhout SZ, Yang PY, Grzelak EM, Nutsch K, Shao S, Zambaldo C, Iaconelli J, Ibrahim L, Stanton C, Chadwick SR, Chen E, DeRan M, Li S, Hull M, Wu X, Chatterjee AK, Shen W, Camargo FD, Schultz PG, Bollong MJ. YAP-dependent proliferation by a small molecule targeting annexin A2. Nat Chem Biol. 2021 Jul;17(7):767-775. doi: 10.1038/s41589-021-00755-0. Epub 2021 Mar 15. PMID: 33723431.

In vivo study

1. Grzelak EM, Elshan NGRD, Shao S, Bulos ML, Joseph SB, Chatterjee AK, Chen JJ, Nguyên-Trân V, Schultz PG, Bollong MJ. Pharmacological YAP activation promotes regenerative repair of cutaneous wounds. Proc Natl Acad Sci U S A. 2023 Jul 11;120(28):e2305085120. doi: 10.1073/pnas.2305085120. Epub 2023 Jul 3. PMID: 37399395; PMCID: PMC10334740.

7. Bioactivity

Product data sheet

Biological target:

PY-60 is a specific activator of YAP transcriptional activity that targets annexin ANXA2 (Kd = 1.4 μM). PY-60 directly binds to ANXA2 and antagonizes its repression of YAP activity.

In vitro activity

This study reports of PY-60, which robustly activated YAP transcriptional activity in vitro. Chemical proteomics revealed the relevant target of PY-60 to be ANXA2. PY-60 treatment frees ANXA2 from the cell membrane, promoting a phosphatase-bound, nonphosphorylated and transcriptionally active form of YAP.

Reference: Nat Chem Biol. 2021 Jul;17(7):767-775. https://pubmed.ncbi.nlm.nih.gov/33723431/

In vivo activity

Topical application of PY-60 promoted regenerative repair of cutaneous wounds in pig and human models.

Reference: Proc Natl Acad Sci U S A. 2023 Jul 11;120(28):e2305085120. https://pubmed.ncbi.nlm.nih.gov/37399395/

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.