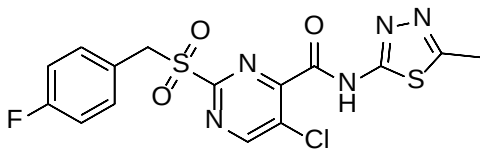
Product data sheet

MedKoo Cat#: 408058 Name: PK11007 CAS: 874146-69-7 Chemical Formula: $C_{15}H_{11}ClFN_5O_3S_2$ Exact Mass: 426.9976 Molecular Weight: 427.8534	
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:
PK11007 is an anti-p53 drug. PK11007 preferentially decreases viability in p53-compromised cancer cell lines IC50 values for inhibition of proliferation in a panel of 17 breast cell lines by PK11007 ranged from 2.3 to 42.2 μM. PK11007 induced apoptosis in p53 mutant cell lines. PK11007 is a potential approach for treating p53-mutated breast cancer, including the subgroup with TN disease. Note: Many vendors are selling PK11007 with wrong structure (the product they are selling is actually PK11000).

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	250.0	584.31

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.34 mL	11.69 mL	23.37 mL
5 mM	0.47 mL	2.34 mL	4.67 mL
10 mM	0.23 mL	1.17 mL	2.34 mL
50 mM	0.05 mL	0.23 mL	0.47 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. Synnott NC, Bauer MR, Madden S, Murray A, Klinger R, O'Donovan N, O'Connor D, Gallagher WM, Crown J, Fersht AR, Duffy MJ. Mutant p53 as a therapeutic target for the treatment of triple-negative breast cancer: Preclinical investigation with the anti-p53 drug, PK11007. Cancer Lett. 2018 Feb 1;414:99-106. doi: 10.1016/j.canlet.2017.09.053. Epub 2017 Oct 22. PMID: 29069577.

2. Bauer MR, Joerger AC, Fersht AR. 2-Sulfonylpyrimidines: Mild alkylating agents with anticancer activity toward p53-compromised cells. Proc Natl Acad Sci U S A. 2016 Sep 6;113(36):E5271-80. doi: 10.1073/pnas.1610421113. Epub 2016 Aug 22. PMID: 27551077; PMCID: PMC5018792.

In vivo study

TBD

7. Bioactivity
Biological target:

PK11007 is an anti-p53 drug.

Product data sheet

In vitro activity

This study found certain 2-sulfonylpyrimidines, including one named PK11007, to be mild thiol alkylators with anticancer activity in several cell lines, especially those with mutationally compromised p53. PK11007 acted by two routes: p53 dependent and p53 independent. PK11007 stabilized p53 in vitro via selective alkylation of two surface-exposed cysteines without compromising its DNA binding activity. Unstable p53 was reactivated by PK11007 in some cancer cell lines, leading to up-regulation of p53 target genes such as p21 and PUMA.

Reference: Proc Natl Acad Sci U S A. 2016 Sep 6;113(36):E5271-80. https://pubmed.ncbi.nlm.nih.gov/27551077/

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.