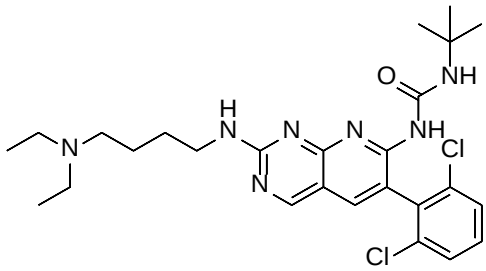
Product data sheet

MedKoo Cat#: 407384 Name: PD-161570 CAS: 192705-80-9 Chemical Formula: $C_{26}H_{35}Cl_2N_7O$ Exact Mass: 531.228 Molecular Weight: 532.514	
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:

PD-161570 is a selective FGFR inhibitor (IC50 values are 40, 262 and 3700 nM for FGFR, PDGFR and EGFR respectively). PD 161570 had about 5- and 100-fold greater selectivity toward the FGF-1 receptor (IC50 = 40 nM) compared with the PDGFbeta receptor (IC50 = 262 nM) or EGF receptor (IC50 = 3.7 microM) tyrosine kinases, respectively. In addition, PD 161570 suppressed constitutive phosphorylation of the FGF-1 receptor in both human ovarian carcinoma cells (A121(p)) and Sf9 insect cells overexpressing the human FGF-1 receptor and blocked the growth of A121(p) cells in culture. The results demonstrate a novel synthetic inhibitor with nanomolar potency and specificity towards the FGF-1 receptor tyrosine kinase.

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	43.29	81.29
Ethanol	53.25	100.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.88 mL	9.39 mL	18.78 mL
5 mM	0.38 mL	1.88 mL	3.76 mL
10 mM	0.19 mL	0.94 mL	1.88 mL
50 mM	0.04 mL	0.19 mL	0.38 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. Wolfe A, O'Clair B, Groppi VE, McEwen DP. Pharmacologic characterization of a kinetic in vitro human co-culture angiogenesis model using clinically relevant compounds. J Biomol Screen. 2013 Dec;18(10):1234-45. doi: 10.1177/1087057113502085. Epub 2013 Sep 9. PMID: 24019254.

2. Batley BL, Doherty AM, Hamby JM, Lu GH, Keller P, Dahring TK, Hwang O, Crickard K, Panek RL. Inhibition of FGF-1 receptor tyrosine kinase activity by PD 161570, a new protein-tyrosine kinase inhibitor. Life Sci. 1998;62(2):143-50. doi: 10.1016/s0024-3205(97)01060-6. PMID: 9488112.

In vivo study

TBD

7. Bioactivity

Biological target:

Product data sheet

PD-161570 is a potent and ATP-competitive human FGF-1 receptor inhibitor with an IC_{50} of 39.9 nM and a K_i of 42 nM.

In vitro activity

1-Tert-butyl-3-[6-(2,6-dichloro-phenyl)-2-(4-diethylamino-butylamino)-py rido[2,3-d]pyrimidin-7-yl]-urea (PD 161570) had about 5- and 100-fold greater selectivity toward the FGF-1 receptor (IC50 = 40 nM) compared with the PDGFbeta receptor (IC50 = 262 nM) or EGF receptor (IC50 = 3.7 microM) tyrosine kinases, respectively. In addition, PD 161570 suppressed constitutive phosphorylation of the FGF-1 receptor in both human ovarian carcinoma cells (A121(p)) and Sf9 insect cells overexpressing the human FGF-1 receptor and blocked the growth of A121(p) cells in culture.

Reference: Life Sci. 1998;62(2):143-50. https://pubmed.ncbi.nlm.nih.gov/9488112/

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.