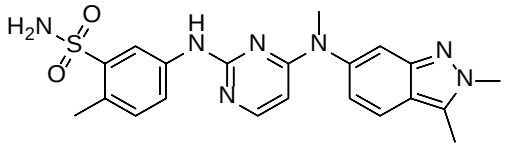
Product data sheet

MedKoo Cat#: 202161 Name: Pazopanib CAS#: 444731-52-6 Chemical Formula: $C_{21}H_{23}N_7O_2S$ Exact Mass: 437.1634 Molecular Weight: 437.52	
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:
Pazopanib is an approved drug, is a small molecule inhibitor of multiple protein tyrosine kinases with potential antineoplastic activity. Pazopanib selectively inhibits vascular endothelial growth factor receptors (VEGFR)-1, -2 and -3, c-kit and platelet derived growth factor receptor (PDGF-R), which may result in inhibition of angiogenesis in tumors in which these receptors are upregulated. Check for active clinical trials or closed clinical trials using this agent. (NCI Thesaurus).

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	8.3	19.0

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.29 mL	11.43 mL	22.86 mL
5 mM	0.46 mL	2.29 mL	4.57 mL
10 mM	0.23 mL	1.14 mL	2.29 mL
50 mM	0.05 mL	0.23 mL	0.46 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. Kim ST, Jang HL, Lee SJ, Lee J, Choi YL, Kim KM, Cho J, Park SH, Park YS, Lim HY, Yashiro M, Kang WK, Park JO. Pazopanib, a novel multitargeted kinase inhibitor, shows potent in vitro antitumor activity in gastric cancer cell lines with FGFR2 amplification. Mol Cancer Ther. 2014 Nov;13(11):2527-36. doi: 10.1158/1535-7163.MCT-14-0255. Epub 2014 Sep 23. PMID: 25249557.
2. Zhao H, Yang F, Shen W, Wang Y, Li X, You J, Zhou Q. Pazopanib diminishes non-small cell lung cancer (NSCLC) growth and metastases in vivo. Thorac Cancer. 2015 Mar;6(2):133-40. doi: 10.1111/1759-7714.12138. Epub 2015 Mar 2. PMID: 26273349; PMCID: PMC4448486.

In vivo study

1. Craveiro RB, Ehrhardt M, Holst MI, Pietsch T, Dilloo D. In comparative analysis of multi-kinase inhibitors for targeted medulloblastoma therapy pazopanib exhibits promising in vitro and in vivo efficacy. Oncotarget. 2014 Aug 30;5(16):7149-61. doi: 10.18632/oncotarget.2240. PMID: 25216529; PMCID: PMC4196191.
2. Zhao H, Yang F, Shen W, Wang Y, Li X, You J, Zhou Q. Pazopanib diminishes non-small cell lung cancer (NSCLC) growth and metastases in vivo. Thorac Cancer. 2015 Mar;6(2):133-40. doi: 10.1111/1759-7714.12138. Epub 2015 Mar 2. PMID: 26273349; PMCID: PMC4448486.

Product data sheet

7. Bioactivity

Biological target: Pazopanib (GW786034) is a multi-target inhibitor of VEGFR1, VEGFR2, VEGFR3, PDGFRβ, c-Kit, FGFR1, and c-Fms with IC50s of 10, 30, 47, 84, 74, 140 and 146 nM, respectively.

In vitro activity

Gastric cancer cell lines were treated with pazopanib to investigate whether inhibition of FGFR2 kinase activity is effective against gastric cancer cell lines harboring FGFR2 amplification and to test the potential therapeutic relevance of these findings. Treatment of the KATO-III, OCUM-2M, SNU-16, and HSC-39 gastric cancer cell lines harboring FGFR2 amplification with pazopanib resulted in marked decreases in cell survival with IC50 in ranges of 0.1 to 2.0 μmol/L, whereas similar treatment of the cell lines without FGFR2 amplification had no effect (Fig. 2A).

Reference: Mol Cancer Ther. 2014 Nov;13(11):2527-36. https://mct.aacrjournals.org/content/13/11/2527.long

In vivo activity

NSCLC (non-small cell lung cancer) xenograft mouse models were used to evaluate the efficacy of pazopanib in vivo. Immune-deficient beige-nude mice were inoculated in the flank with 1 × 107 of two types of NSCLC cells (A549-luc, L9981-luc), which are cell lines stably expressing a luciferase reporter gene. When the tumors reached a palpable size, mice were randomized into a treated group (pazopanib 100 mg/kg) and a control group. Pazopanib or vehicle was orally administered daily. Tumor growths in the treated groups were significantly delayed compared with the control groups (Fig 2A–C, Fig 3A–B), and pazopanib also reduced the number of metastases in the xenograft mice (Fig 2D). Pazopanib prolonged the mouse survival in the treated group, and the mean OS (overall survival) was days 46.1 and 50.4 in the treated group of A549 and L9981 mice, versus days 55.3 and 56 in the control groups (Fig 2E, Fig 3C).

Reference: Thorac Cancer. 2015 Mar;6(2):133-40. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4448486/

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.