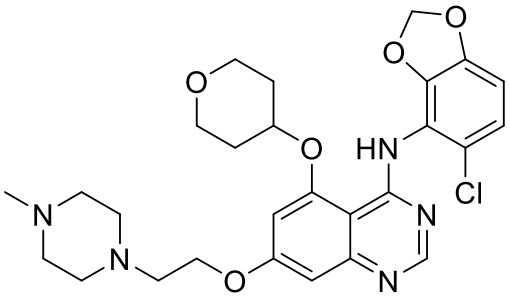
Product data sheet

MedKoo Cat#: 200410 Name: Saracatinib free base CAS#: 379231-04-6 (free base) Chemical Formula: $C_{27}H_{32}ClN_5O_5$ Exact Mass: 541.2092 Molecular Weight: 542.03	
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:
Saracatinib, also known as AZD0530, is an orally available dual-specific inhibitor of Src and Abl with anti-invasive and anti-tumor activities. Src and Abl are protein tyrosine kinases that are overexpressed in chronic myeloid leukemia cells. Saracatinib binds to and inhibits these tyrosine kinases and their effects on cell motility, cell migration, adhesion, invasion, proliferation, differentiation, and survival.

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	50	92.25

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	1.84 mL	9.22 mL	18.45 mL
5 mM	0.37 mL	1.84 mL	3.69 mL
10 mM	0.18 mL	0.92 mL	1.84 mL
50 mM	0.04 mL	0.18 mL	0.37 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. Shin JS, Jung E, Kim M, Baric RS, Go YY. Saracatinib Inhibits Middle East Respiratory Syndrome-Coronavirus Replication In Vitro. Viruses. 2018 May 24;10(6):283. doi: 10.3390/v10060283. PMID: 29795047; PMCID: PMC6024778.
2. Yamaguchi H, Takanashi M, Yoshida N, Ito Y, Kamata R, Fukami K, Yanagihara K, Sakai R. Saracatinib impairs the peritoneal dissemination of diffuse-type gastric carcinoma cells resistant to Met and fibroblast growth factor receptor inhibitors. Cancer Sci. 2014 May;105(5):528-36. doi: 10.1111/cas.12387. Epub 2014 Mar 24. PMID: 24612061; PMCID: PMC4317844.

In vivo study

1. Amadori L, Calcagno C, Fernandez DM, Koplev S, Fernandez N, Kaur R, Mury P, Khan NS, Sajja S, Shamailova R, Cyr Y, Jeon M, Hill CA, Chong PS, Naidu S, Sakurai K, Ghotbi AA, Soler R, Eberhardt N, Rahman A, Faries P, Moore KJ, Fayad ZA, Ma'ayan A, Giannarelli C. Systems immunology-based drug repurposing framework to target inflammation in atherosclerosis. Nat Cardiovasc Res. 2023 Jun;2(6):550-571. doi: 10.1038/s44161-023-00278-y. Epub 2023 Jun 8. PMID: 37771373; PMCID: PMC10538622.
2. Gage M, Putra M, Wachter L, Dishman K, Gard M, Gomez-Estrada C, Thippeswamy T. Saracatinib, a Src Tyrosine Kinase Inhibitor, as a Disease Modifier in the Rat DFP Model: Sex Differences, Neurobehavior, Gliosis, Neurodegeneration, and Nitro-

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Oxidative Stress. Antioxidants (Basel). 2021 Dec 28;11(1):61. doi: 10.3390/antiox11010061. PMID: 35052568; PMCID: PMC8773289.

7. Bioactivity

Biological target:

Saracatinib is a potent Src family inhibitor with IC50s of 2.7 to 11 nM for c-Src, Lck, c-YES, Lyn, Fyn, Fgr, and Blk. Saracatinib shows high selectivity over other tyrosine kinases.

In vitro activity

Saracatinib potently inhibited Middle East respiratory syndrome-coronavirus (MERS-CoV) at the early stages of the viral life cycle in Huh-7 cells. Saracatinib exhibited a synergistic effect with gemcitabine. Saracatinib alone or in combination with gemcitabine could provide a new therapeutic option for the treatment of MERS-CoV infection.

Reference: Viruses. 2018 May 24;10(6):283. https://pubmed.ncbi.nlm.nih.gov/29795047/

In vivo activity

Saracatinib displays significant potential for atherosclerotic cardiovascular disease (ASCVD) treatment. Identifying unique ASCVD-related inflammatory signatures led to the recognition of saracatinib as an immunotherapy candidate. In ex vivo screens using human samples, saracatinib reversed inflammatory responses induced by ASCVD plasma. In Apoe-/- mice, saracatinib reduced atherosclerosis progression and in a rabbit model of advanced atherosclerosis, saracatinib reduced plaque inflammation.

Reference: Nat Cardiovasc Res. 2023 Jun;2(6):550-571. https://pubmed.ncbi.nlm.nih.gov/37771373/

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.