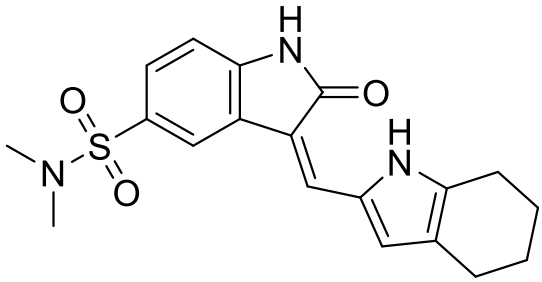
Product data sheet

MedKoo Cat#: 406731 Name: SU6656 CAS#: 330161-87-0 Chemical Formula: $C_{19}H_{21}N_3O_3S$ Exact Mass: 371.1304 Molecular Weight: 371.45	
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:

SU6656 is a potent and selective dual inhibitor of Src family kinases and Aurora kinase. SU6656 modulates CTGF (connective tissue growth factor) expression in an ERK-dependent manner. SU6656 induces caspase-independent cell death in FRO anaplastic thyroid carcinoma cells and therapeutic synergy in human synovial sarcoma growth, invasion and angiogenesis in vivo.

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	20	53.84

4. Stock solution preparation table:

Concentration / Solvent Volume / Mass	1 mg	5 mg	10 mg
1 mM	2.69 mL	13.46 mL	26.92 mL
5 mM	0.54 mL	2.69 mL	5.38 mL
10 mM	0.27 mL	1.35 mL	2.69 mL
50 mM	0.05 mL	0.27 mL	0.54 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. Vu AT, Akingunsade L, Hoffer K, Petersen C, Betz CS, Rothkamm K, Rieckmann T, Bussmann L, Kriegs M. Src family kinase targeting in head and neck tumor cells using SU6656, PP2 and dasatinib. Head Neck. 2023 Jan;45(1):147-155. doi: 10.1002/hed.27216. Epub 2022 Oct 25. PMID: 36285353.
2. Cicha I, Zitzmann R, Goppelt-Struebe M. Dual inhibition of Src family kinases and Aurora kinases by SU6656 modulates CTGF (connective tissue growth factor) expression in an ERK-dependent manner. Int J Biochem Cell Biol. 2014 Jan;46:39-48. doi: 10.1016/j.biocel.2013.11.014. Epub 2013 Nov 22. PMID: 24275091.

In vivo study

1. Thouverey C, Ferrari S, Caverzasio J. Selective inhibition of Src family kinases by SU6656 increases bone mass by uncoupling bone formation from resorption in mice. Bone. 2018 Aug;113:95-104. doi: 10.1016/j.bone.2018.05.006. Epub 2018 May 8. PMID: 29751129.
2. Arai R, Tsuda M, Watanabe T, Ose T, Obuse C, Maenaka K, Minami A, Ohba Y. Simultaneous inhibition of Src and Aurora kinases by SU6656 induces therapeutic synergy in human synovial sarcoma growth, invasion and angiogenesis in vivo. Eur J Cancer. 2012 Oct;48(15):2417-30. doi: 10.1016/j.ejca.2011.12.028. Epub 2012 Jan 13. PMID: 22244830.

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7. Bioactivity

Biological target:

SU6656 is a Src family kinases inhibitor with IC50s of 280, 20, 130, 170 nM for Src, Yes, Lyn, and Fyn, respectively. SU6656 inhibits FAK phosphorylation at Y576/577, Y925, Y861 sites and inhibits p-AKT.

In vitro activity

This study demonstrates the potential benefit of SFK inhibition in head and neck squamous cell carcinoma (HNSCC), but also the challenges due to non-specificities of the different drugs. Proliferation on three HNSCC cell lines was blocked by SU6656, PP2 and dasatinib. With respect to cell kill, dasatinib was most effective, while SU6656 showed moderate and PP2 minor effects. Cellular signaling was affected differently, with only SU6656 showing clear SFK specific effects on signaling.

Reference: Head Neck. 2023 Jan;45(1):147-155. https://pubmed.ncbi.nlm.nih.gov/36285353/

In vivo activity

SU6656 uncouples bone formation from resorption by inhibiting osteoclast development, function and survival, and by enhancing BMP-mediated osteoblast differentiation. SU6656-treated mice exhibited increased bone mineral density, cortical thickness, cancellous bone volume and trabecular thickness. SU6656 inhibited bone resorption in mice as shown by reduced osteoclast number, and diminished expressions of Oscar, Trap5b and CtsK. SU6656 did not affect Rankl or Opg expressions.

Reference: Bone. 2018 Aug;113:95-104. https://pubmed.ncbi.nlm.nih.gov/29751129/

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.