



Product Specification Sheet

Product Name: Sorafenib

Catalog Number: C7672

Technical information:

Chemical Formula: $C_{21}H_{16}ClF_3N_4O_3$

CAS #: 284461-73-0

Molecular Weight: 464.82

Purity: > 99%

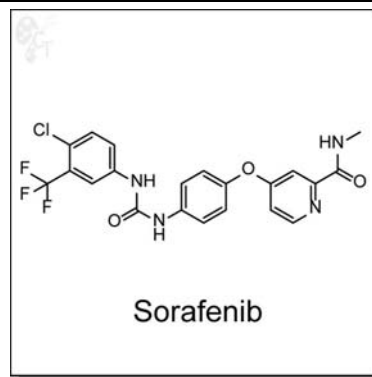
Appearance: White solid

Solubility: Soluble in DMSO up to 100mM

Chemical Name: 4-(4-(3-(4-chloro-3-(trifluoromethyl)phenyl)ureido)phenoxy)-N-methylpicolinamide

Storage: Store solid powder at 4°C desiccated; Store DMSO solution at -20°C.

Shelf Life: In the unopened package, powder is stable for 1 year and DMSO solution is stable for 6 months under proper storage condition.



Sorafenib

- Handling:**
- To make 10 mM stock solution, add 0.215mL of DMSO for each mg of Sorafenib.
 - For DMSO solution, briefly spin the vial at 500 rpm in a 50 mL conical tube to ensure maximum sample recovery.

Biological Activity: Sorafenib (BAY 43-9006) is biarylurea-based inhibitor of Raf1 (IC₅₀, 6 nM) with additional activity against B-Raf, mVEGFR2, mPDGFRb (IC₅₀, 22 nM, 15 nM, and 57 nM respectively), and related kinases. [1] In MDA-MB-231 breast cancer cells, sorafenib efficiently blocks activation of the MAPK pathway. Dose-dependent inhibition of basal MEK 1/2 and ERK 1/2 phosphorylation was observed at IC₅₀s of 40 and 100 nM, respectively. [1]

In hepatocellular carcinoma cell lines, sorafenib inhibited cell proliferation in a dose-dependent manner with an IC₅₀ of 6.3 μM in PLC/PRF/5 and 4.5 μM in HepG2 cells. [2] Flow cytometry studies indicated a decrease in G1 and increase of S phase after sorafenib treatment in HepG2 cells.

- Reference:**
1. Wilhelm et al., BAY 43-9006 exhibits broad spectrum oral antitumor activity and targets the RAF/MEK/ERK pathway and receptor tyrosine kinases involved in tumor progression and angiogenesis. *Cancer Res.* 2004, 64, 7099-7109. Pubmed ID: 15466206
 2. Liu et al., Sorafenib blocks the RAF/MEK/ERK pathway, inhibits tumor angiogenesis, and induces tumor cell apoptosis in hepatocellular carcinoma model PLC/PRF/5. *Cancer Res.* 2006, 66, 11851-11858. Pubmed ID: 17178882

To reorder: <http://www.cellagentech.com/Sorafenib/>

For Technical Support: technical@cellagentech.com

Chemicals are sold for research use only, not for clinical or diagnostic use.