Data Sheet

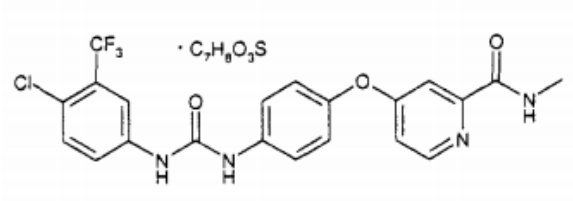
Sorafenib Tosylate

Catalog #: 27014

Lot #: 120626

Size: 100 mg

Structure:



CAS Registry #: 475207-59-1

Purity: ≥99%

Chemical Formula: $C_{21}H_{16}ClF_3N_4O_3 \cdot C_7H_8O_3S$

Molecular Weight: 637.03

Description: Sorafenib Tosylate, also known as Bay 43-9006, is a novel bi-aryl urea compound that inhibits cell proliferation by targeting receptor tyrosine kinases, including VEGFR-2 and PDGFR--β and their associated signaling cascades of the ERK pathway and angiogenesis. It was originally developed as a Raf kinase inhibitor. It has been shown to have activity against several receptor tyrosine kinases involved in tumorigenesis and angiogenesis. Sorafenib is not active against erbB1, erbB2, ERK-1, MEK-1, EGFR, HER-2, IGFR-1, c-MET, c-yes, PKB, PKA, cdk1/cyclinB, PKC, and pim-1. Sorafenib has been shown to inhibit various nonkinase targets, including adenosine A3, dopamine D1, and muscarine M3 receptors, but at much higher (micromolar) concentrations than kinase targets. It is also the active ingredient in a drug that has been approved in at least one country for use in patients with advanced renal cell cancer. *This version is NOT for human use.*

Appearance: Off-white crystalline powder

Solubility: Soluble in DMSO at 200 mg/ml. It is poorly soluble in ethanol and water. The maximum solubility in plain water is ~10-20 µM. Buffers, serum or other additives may increase or decrease the aqueous solubility.

Biological Activity: The biological activity of Sorafenib is as follows:

Kinase	IC_{50} ± SD
Raf-1	6 ± 3
BRAF wild-type	22 ± 6
VEGFR-2	90 ± 15
Flt-3	58 ± 20
c-KIT	68 ± 21
FGFR-1	580 ± 100

Storage/Stability: Store at or below -20°C.

Quality Control: The purity was determined by HPLC analysis.

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References:

1. Wilhelm, S.M., *et al., Cancer Res.* 2004;**64**:7099-7109.
2. Carter, C., *et al.,* "Investigators Brochure Bay 43-9006/ Raf Kinase Inhibitor." *Version No. 5. West Haven, CT, Bayer Pharmaceuticals Corporation, 2004.*