NEUROMICS

Sorafenib Data Sheet

Catalog Number:	MC11106	**Product Type:**	Small Molecule
Bio-Activity:	Raf-1 inhibitor (and other kinases)	**CAS #:**	284461-73-0
Research Categories:	Cell death, cancer	**Chemical Name:**	4-(4-(3-(4-chloro-3-(trifluoromethyl)phenyl)ureido)phenoxy)-N-methylpicolinamide
Solubility:	Soluble in DMSO (up to 200 mg/ml) or in Ethanol (up to 3 mg/ml).	**Molecular Formula:**	C21H16ClF3N4O3
Purity:	> 98%	**Molecular Weight:**	464.83
Format:	Powder	**Ship Temp:**	Ambient
Storage:	-20°C		

Application Notes

Description/Data:
Initially developed as a Raf kinase inhibitor, IC50 = 6 nM, but has been shown to inhibit many receptor tyrosine kinases including BRAF (IC50 = 22 nM); VEGFR-2 (IC50 = 90 nM); VEGFR-3 (IC50 = 20 nM); PDGFR-β (IC50 = 57 nM); Flt3 (IC50 = 58 nM); c-KIT (IC50 = 68 nM); FGFR-1 (IC50 = 580 nM) [1]. Paradoxically more potent in a cellular assay (IC50 = 20 nM) compared to an isolated enzyme assay (IC50 = 107 nM) for c-Fms [2]. Inhibits activation of MAPK pathway and ERK phosphorylation [3]. Induces caspase-independent apoptosis in melanoma cells [4]. Clinically useful anticancer agent.

References:

1) Wilhelm et al. (2004), 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., 64 7099

2) Guo et al. (2006), Inhibition of phosphorylation of the colony-stimulating factor-1 receptor (c-Fms) tyrosine kinase in transfected cells by ABT-869 and other tyrosine kinase inhibitors; Mol. Cancer Ther., 5 1007

3) Wilhelm et al. (2003), The novel Raf inhibitor BAY 43-9006 blocks signaling and proliferation in BRAF mutant and wildtype melanoma and colorectal tumor cell lies; Proc. Am. Assoc. Cancer Res., 44 106609

4) Panka et al. (2006), The Raf inhibitor BAY 43-9006 (Sorafenib) induces caspase-independent apoptosis in melanoma cells; Cancer Res., 66 1611

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