Sunitinib

#12328 Store at -20°C

☑ 10 mg

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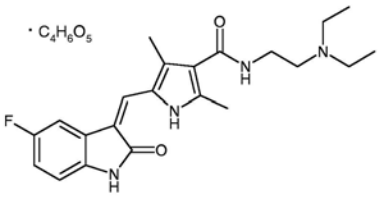
For Research Use Only. Not For Use In Diagnostic Procedures.

Background: Sunitinib, also known as SU11248, is a multi-tyrosine kinase inhibitor widely known to target PDGFR, VEGFR, KIT, and FLT3, and therefore has both antitumor and antiangiogenic activities. Cellular phosphorylation assays show that sunitinib effectively inhibits ligand-dependent phosphorylation of these receptor tyrosine kinases in nanomolar concentrations and can also inhibit ligand-dependent cellular proliferation (1-3). Sunitinib displays greater than 10-fold selectively for PDGFRB and VEGFR over numerous other kinases, including EGFR, Cdk2, Met, IGF -1R, Abl, and src (2). Inhibition of CSF-1 (4) and RET (5) by sunitinib has also been observed.

Molecular Formula: $C_{22}H_{27}FN_4O_2 \bullet C_4H_6O_5$



Molecular Weight: 532.56 g/mol

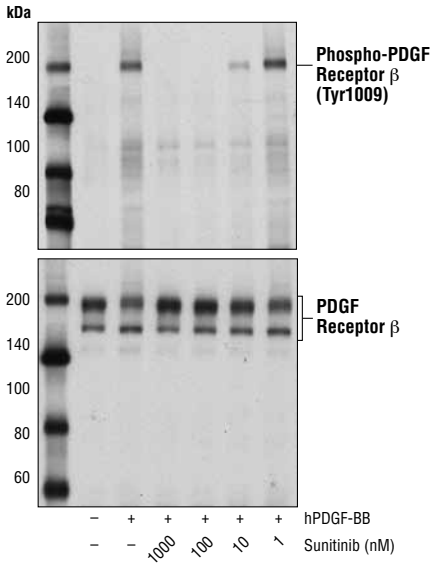
Solubility: Soluble in DMSO at 40 mg/ml; poorly soluble in ethanol and water with maximum solubility in water ~10-50 µM.

Purity: >99%

Directions for Use: Sunitinib is supplied as a lyophilized powder. For a 5 mM stock, reconstitute the 10 mg in 3.76 ml DMSO. Working concentrations and length of treatment can vary depending on the desired effect, but it is typically used at 0.1-10 µM either as a pretreatment for 0.5-2 hr prior to treating with a stimulator or is used alone with varying treatment times lasting up to 24 hr.

Background References:

(1) Abrams, T.J. et al. (2003) *Mol Cancer Ther* 2, 471-8.
(2) Mendel, D.B. et al. (2003) *Clin Cancer Res* 9, 327-37.
(3) O'Farrell, A.M. et al. (2003) *Blood* 101, 3597-605.
(4) Guo, J. et al. (2006) *Mol Cancer Ther* 5, 1007-13.
(5) Broutin, S. et al. (2011) *Clin Cancer Res* 17, 2044-54.



Western blot analysis of extracts from NIH/3T3 cells, serum-starved overnight and untreated or treated with hPDGF-BB #8912 (100 ng/ml, 5 min) either with or without Sunitinib pre-treatment (2 hr) at the indicated concentrations, using Phospho-PDGF Receptor β (Tyr1009) (42F9) Rabbit mAb #3124 (upper) or PDGF Receptor β (28E1) Rabbit mAb #3169 (lower).

Storage: Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Applications Key: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide
Species Cross-Reactivity Key: **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.