

PRODUCT INFORMATION

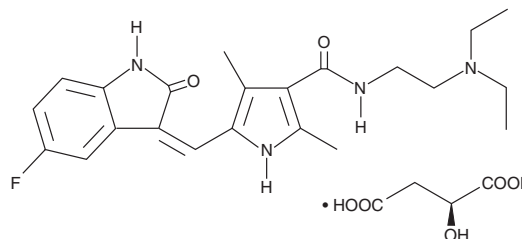


Sunitinib (malate)

Item No. 13159

CAS Registry No.: 341031-54-7
Formal Name: N-[2-(diethylamino)ethyl]-5-[(Z)-(5-fluoro-1,2-dihydro-2-oxo-3H-indol-3-ylidene)methyl]-2,4-dimethyl-1H-pyrrole-3-carboxamide, (2S)-hydroxy-butanedioic acid

Synonym: SU11248
MF: C₂₂H₂₇FN₄O₂ • C₄H₆O₅
FW: 532.6
Purity: ≥98%
UV/Vis.: λ_{max}: 267, 427 nm
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥2 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Sunitinib (malate) is supplied as a crystalline solid. A stock solution may be made by dissolving the sunitinib (malate) in the solvent of choice. Sunitinib (malate) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of sunitinib (malate) in these solvents is approximately 5 and 1 mg/ml, respectively.

Sunitinib (malate) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, sunitinib (malate) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Sunitinib (malate) has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Sunitinib is a small molecule inhibitor of receptor tyrosine kinases, including FLK1 ($K_i = 9$ nM), PDGFR β ($K_i = 8$ nM), and FLT3.^{1,2} It is at least 10-fold selective for FLK1 and PDGFR β over a variety of tyrosine kinases in a panel, including EGFR, Cdk2, Met, IGFR-1, Abl, and Src.² Sunitinib inhibits VEGF-dependent FLK1 and PDGF-dependent PDGFR β phosphorylation (IC_{50} s = 10 and 10 nM, respectively) as well as phosphorylation of FLT3 and FLT3 carrying the activating internal tandem duplication mutation (FLT3-ITD; IC_{50} s = 250 and 50 nM, respectively).^{1,2} It decreases VEGF- and FGF-induced proliferation of human umbilical vein endothelial cells (HUVECs; IC_{50} s = 30 and 700 nM, respectively) and reduces tumor growth in a variety of mouse xenograft models when administered at doses ranging from 20 to 80 mg/kg per day.² Formulations containing sunitinib have been used in the treatment of gastrointestinal stromal tumors and metastatic renal cell carcinoma.

References

1. O'Farrell, A.-M., Abrams, T.J., Yuen, H.A., *et al.* SU11248 is a novel FLT3 tyrosine kinase inhibitor with potent activity *in vitro* and *in vivo*. *Blood* **101**(9), 3597-3605 (2003).
2. Mendel, D.B., Laird, A.D., Xin, X., *et al.* *In vivo* antitumor activity of SU11248, a novel tyrosine kinase inhibitor targeting vascular endothelial growth factor and platelet-derived growth factor receptors: Determination of a pharmacokinetic/pharmacodynamic relationship. *Clin. Cancer Res.* **9**(1), 327-337 (2003).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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