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,	H O
	(2S)-hydroxy-butanedioic acid	\sim
Synonym:	SU11248	
MF:	$C_{22}H_{27}FN_4O_2 \bullet C_4H_6O_5$	
FW:	532.6	
Purity:	≥98%	F H COOH
UV/Vis.:	λ _{max} : 267, 427 nm	• HOOC
Supplied as:	A crystalline solid	OH
Storage:	-20°C	
Stability:	≥4 years	
Information represents the product expecifications. Batch expecific analytical results are provided on each cartificate of analysis		

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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, which should be purged with an inert gas. Sunitinib (malate) is soluble in organic solvents such as DMSO and dimethyl formamide. 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 (IC₅₀s = 10 and 10 nM, respectively) as well as phosphorylation of FLT3 and FLT3 carrying the activating internal tandem duplication mutation (FLT3-ITD; IC₅₀s = 250 and 50 nM, respectively).^{1,2} It decreases VEGF- and FGF-induced proliferation of human umbilical vein endothelial cells (HUVECs; IC₅₀s = 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.

SAFFTY 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.

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