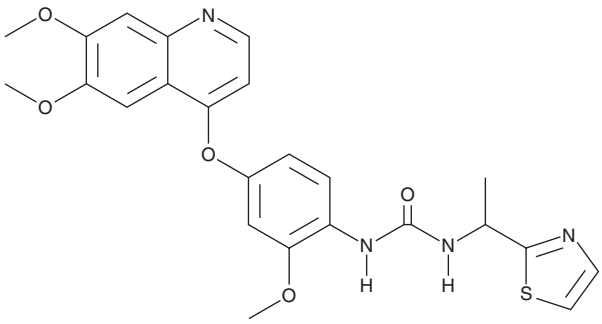
PRODUCT INFORMATION

Ki20227

Item No. 22258

CAS Registry No.:	623142-96-1
Formal Name:	N-[4-[(6,7-dimethoxy-4-quinolinyl)oxy]-2-methoxyphenyl]-N'-[1-(2-thiazolyl)ethyl]-urea
MF:	$C_{24}H_{24}N_4O_5S$
FW:	480.5
Purity:	≥98%
UV/Vis.:	λ_{max}: 242, 295, 322 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



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

Laboratory Procedures

Ki20227 is supplied as a crystalline solid. A stock solution may be made by dissolving the Ki20227 in the solvent of choice, which should be purged with an inert gas. Ki20227 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of Ki20227 in these solvents is approximately 12.5 mg/ml.

Ki20227 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, Ki20227 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Ki20227 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

Ki20227 is an inhibitor of macrophage colony stimulating factor 1 (CSF1) receptor tyrosine kinase (c-Fms; IC_{50} = 2 nM).[1] It inhibits CSF1-dependent c-Fms phosphorylation in a dose-dependent manner in RAW264.7 cells and reduces CSF1-dependent growth of M-NFS-60 cells (IC_{50} = 14 nM). Ki20227 suppresses development of TRAP-positive osteoclast-like cells from murine bone marrow (IC_{50} = 40 nM) and decreases the number and area of osteolytic lesions on femurs and tibiae in a murine A375 subcutaneous xenograft model. Ki20227 also reduces TNF-α infiltration and osteolytic bone destruction in a collagen-induced arthritis (CIA) mouse model.[2]

References

1. Ohno, H., Kubo, K., Murooka, H., *et al.* A c-fms tyrosine kinase inhibitor, Ki20227, suppresses osteoclast differentiation and osteolytic bone destruction in a bone metastasis model. *Mol. Cancer Ther.* **5(11)**, 2634-2643 (2006).
2. Ohno, H., Uemura, Y., Murooka, H., *et al.* The orally-active and selective c-Fms tyrosine kinase inhibitor Ki20227 inhibits disease progression in a collagen-induced arthritis mouse model. *Eur. J. Immunol.* **38(1)**, 283-291 (2008).

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