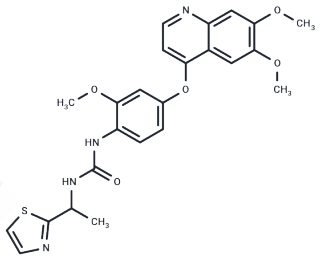
Data Sheet (Cat.No.T4315)

TargetMol

Ki20227

Chemical Properties



CAS No. : 623142-96-1

Formula: C24H24N4O5S

Molecular Weight: 480.54

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

Biological Description

Description	Ki-20227 is a specific c-Fms tyrosine kinase(CSF1R) inhibitor (IC50: 2 nM). It also has certain inhibitory against VEGFR2(IC50: 12 nM) and c-Kit/PDGFRβ(IC50: 451/217 nM), respectively.
Targets(IC50)	c-Fms,c-Kit,CSF-1R,PDGFR,VEGFR
In vitro	Ki20227 hasn't inhibition for other kinases tested, such as EGFR, Fms-like tyrosine kinase-3, or c-Src (c-src proto-oncogene product). Ki20227 also inhibits the M-CSF-dependent growth of M-NFS-60 cells but not the M-CSF-independent growth of A375 human melanoma cells in vitro. Ki20227 has an inhibition against M-CSF-dependent reactions, such as lipopolysaccharide-induced TNF-α production, which was enhanced by M-CSF in vitro.
In vivo	Ki20227 reduces the number of tartrate-resistant acid phosphatase-positive osteoclast-like cells on bone surfaces in ovariectomized (ovx) rats. Furthermore, in the Ki20227-treated mice, the number of CD11b(+), Gr-1(+), and Ly-6 g(+) cells in the spleen were decreased and the CII-induced cytokine production in splenocytes isolated from the Ki20227-treated arthritic mice was also reduced. In EAE animal model, Ki20227 inhibits the turn-over/expansion of myeloid cells provoked by the immunization and subsequent MOG-specific T cell responses.

Solubility Information

Solubility	DMSO: 55 mg/mL (114.45 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2 mg/mL (4.16 mM),Sonication is recommended. *Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.*

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.081 mL	10.405 mL	20.8099 mL
5 mM	0.4162 mL	2.081 mL	4.162 mL
10 mM	0.2081 mL	1.0405 mL	2.081 mL
50 mM	0.0416 mL	0.2081 mL	0.4162 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Ohno 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. 2006 Nov;5(11):2634-43.
Ohno 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. 2008 Jan;38(1):283-91.
Uemura Y, et al. The selective M-CSF receptor tyrosine kinase inhibitor Ki20227 suppresses experimental autoimmune encephalomyelitis. J Neuroimmunol. 2008 Mar;195(1-2):73-80.
Boru Hou, et al. Ki20227 influences the morphology of microglia and neurons through inhibition of CSF1R during global ischemia. Int J Clin Exp Pathol. 2016;9(12):12459-12469.