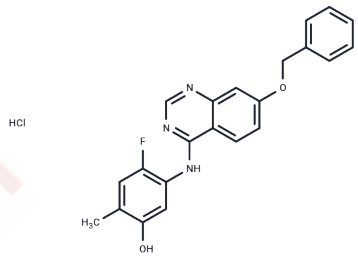
Data Sheet (Cat.No.T1991)

TargetMol

ZM323881 hydrochloride

Chemical Properties



CAS No. : 193000-39-4

Formula: C22H19ClFN3O2

Molecular Weight: 411.86

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	ZM323881 hydrochloride (ZM 323881 HCl) is a potent and selective VEGFR2 inhibitor.
Targets(IC50)	EGFR,FGFR,PDGFR,VEGFR
In vivo	At concentrations below 1 μM, ZM323881 inhibits the proliferation of neural stem cells stimulated by VEGF in a dose-dependent manner. It impedes the activation of extracellular signal-regulated kinase, p38, Akt, and endothelial nitric oxide synthase (eNOS) through VEGF blockade at 1 μM, without suppressing the expression of the VEGFR-1 specific ligand, placental growth factor (PlGF), in human aortic endothelial cells (HAECs). Additionally, 1 μM ZM323881 disrupts VEGF-induced membrane extension, cell migration, and tube formation in HAECs and reverses the phosphorylation of CrkII and its SRC homology 2 domain-binding protein p130Cas, key in regulating endothelial cell migration. ZM323881 inhibits the proliferation of HUVEC cells induced by VEGF-A, EGF, and bFGF, with IC50 values of 8 nM, 1.9 μM, and 1.6 μM respectively. At 10 nM, ZM323881 eradicates the increase in vascular permeability mediated by VEGF-A in the mesenteric microvasculature of male leopards. Furthermore, 10 nM ZM323881 completely obstructs VEGF-induced promoter activity and Hif-1α protein accumulation in VEGF-stimulated SCC-9 cells.

Solubility Information

Solubility	DMSO: 40 mg/mL (97.12 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 (4.86 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	2.428 mL	12.140 mL	24.2801 mL
5 mM	0.4856 mL	2.428 mL	4.856 mL
10 mM	0.2428 mL	1.214 mL	2.428 mL
50 mM	0.0486 mL	0.2428 mL	0.4856 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

Whittles CE, et al. Microcirculation, 2002, 9(6), 513-522.
Wang J, Wen Y, Zhang Y, et al.An interpretable artificial intelligence framework for designing synthetic lethality-based anti-cancer combination therapies.Journal of Advanced Research.2023
Endo A, et al. Assay Drug Dev Technol, 2011, 9(2), 125-135.
Slomiany MG, et al. Biochem Biophys Res Commun, 2006, 342(3), 851-858.
Garrett TA, et al. Exp Cell Res, 2007, 313(15), 3285-3297.
Xiao Z, et al. Cell Res, 2007, 17(1), 73-79.