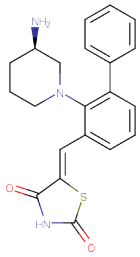
Data Sheet (Cat.No.T2300)

TargetMol
A DRUG SCREENING EXPERT

AZD1208

Chemical Properties



CAS No. : 1204144-28-4

Formula: C21H21N3O2S

Molecular Weight: 379.48

Appearance: no data available

Storage: Powder: -20°C for 3 years | In solvent: -80°C for 1 year

Biological Description

Description	AZD1208 is a novel, orally bioavailable, highly selective PIM kinase inhibitor with single nanomolar potency against all three PIM kinases.
Targets(IC50)	Apoptosis,Pim,Autophagy
In vitro	AZD1208 dose-dependently inhibits the growth of MOLM-16 and KG-1a xenograft tumors in vivo.
In vivo	AZD1208 induces cell cycle arrest and apoptosis in cultured MOLM-16 cells, accompanied by a dose-dependent decrease in the phosphorylation of BAD, 4EBP1, and p70S6K. Additionally, AZD1208 effectively inhibits colony growth of primary AML cells derived from bone marrow aspirates and downregulates phosphorylation of Pim targets.
Kinase Assay	The activity of purified human PIM-1, PIM-2 and PIM-3 enzymes on substrate FL-Ahx-Bad (FITC-(AHX)RSRHSSYPAGT-COOH) is determined using a mobility shift assay on a Caliper LC3000 reader. The PIM-1 assay is performed in a 12 mL reaction containing 50 mM HEPES (pH 7.5), 1 mM DTT, 0.01% Tween 20, 50 mg/mL BSA, 10 mM MgCl2, 1.5 mM FL-Ahx-Bad peptide, 100 mM ATP, 2.5 nM PIM-1 and various amount of inhibitor. The reaction is quenched after 90 minute incubation at 25?C with?5 mL of stop mix consisting of 100 mM HEPES, 121 mM EDTA, 0.8% Coating Reagent 3 and 0.01% Tween 20. The ATP and enzyme concentrations for the PIM-2 assay are 5 mM and 2.5 nM, respectively, while 50 mM of ATP and 0.33 nM of enzyme is used for PIM-3 assays. For high [ATP] screenings, 5 mM ATP is used with 0.67 nM enzyme for both PIM-1 and PIM-2 or 0.11 nM PIM-3. Fluorescence of phosphorylated and unphosphorylated substrate is detected and a ratiometric value is calculated to determine percent turnover. IC50 values are determined from dose-response data using IDBS ActivityBase software.
Cell Research	AZD1208 is dissolved in DMSO. MOLM-16 cells, purchased from DSMZ and cultured in RPMI containing 10% fetal bovine serum (FBS) and 1% L-glutamine, are plated at 20,000 cells per well in 96 well plates overnight. Cells are treated for 72 hours with compound or control vehicle (dimethyl sulfoxide) and cell viability is measured after the addition of Cell Titer-Blue for 4 hours at 37?C and reading of fluorescence on a Tecan Infinite? 200. The GI50 is determined by calculating growth at each dose relative to vehicle treated cells and cell viability at the time of treatment.

Solubility Information

Solubility	DMSO: 7.6 mg/mL (20 mM),with gentle warming (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6352 mL	13.1759 mL	26.3518 mL
5 mM	0.527 mL	2.6352 mL	5.2704 mL
10 mM	0.2635 mL	1.3176 mL	2.6352 mL
50 mM	0.0527 mL	0.2635 mL	0.527 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.

Reference

Erika Keeton, et al. 53rd ASH Annual Meeting (2011) Abstract nr 1540

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