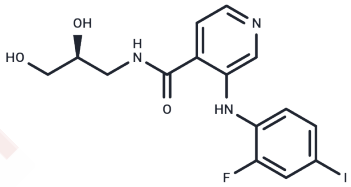
Data Sheet (Cat.No.T6131)

TargetMol

Pimasertib

Chemical Properties



CAS No. : 1236699-92-5

Formula: C15H15FIN3O3

Molecular Weight: 431.2

Appearance: no data available

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

Biological Description

Description	Pimasertib (AS703026) is an orally bioavailable small-molecule inhibitor of MEK1 and MEK2 (MEK1/2) with potential antineoplastic activity.
Targets(IC50)	MEK
In vitro	At dosages of 10 mg/kg, AS703026 effectively inhibits the growth of colorectal xenograft tumors with K-Ras mutations (D-MUT) in humans and significantly reduces p-ERK levels. Additionally, at concentrations of 15 and 30 mg/kg, AS703026 substantially inhibits the growth of human myeloma H929 mM xenograft tumors. This inhibition is likely associated with the downregulation of pERK1/2, induced PARP cleavage, and reduction in microvasculature.
In vivo	AS703026 (10 μM) effectively inhibits the ERK pathway, proliferation, and transformation in human DLD-1 colorectal cancer cells carrying K-Ras mutant alleles (D-MUT). It suppresses the growth and viability of human multiple myeloma cells, including U266 and INA-6 cells, with IC50 values of 5 and 11 nM, respectively. This inhibitory action of AS703026 is mediated by G0-G1 cell cycle arrest and is accompanied by a reduction in MAF oncogene expression. In the presence or absence of bone marrow stromal cells (BMSC), AS703026 further induces apoptosis in MM cells via caspase-3 and PARP cleavage. AS703026 is effective in the treatment of colorectal cancer caused by K-Ras mutations.
Kinase Assay	The Aurora kinase activity is measured with 10 μM ATP and a peptide containing a dual repeat of the kemptide phosphorylation motif.
Cell Research	Method: Measuring incorporation of 14C-labelled thymidine into newly synthesized DNA within the cells to determine the ability of JNJ-7706621 to inhibit the proliferation of cell growth. Cells are trypsinized and counted and 3-8 ×103 cells are added to each well of a 96-well CytoStar tissue culture treated scintillating microplate in 100 μL complete medium in a volume. Cells are incubated for 24 hours at 37 °C in an atmosphere containing 5% CO2. Next, 1 μL JNJ-7706621 is added to the wells of the plate. Cells are incubated for another 24 hours. Methyl 14C-thymidine 56 mCi/mmol is diluted in complete medium and 0.2 μCi/well is added to each well of the CytoStar plate in a volume of 20 μL. The plate is incubated for 24 hours at 37 °C in JNJ-7706621 with 14C-thymidine. The contents of the plate are discarded and the plate is washed twice with 200 μL PBS. 200 μL of PBS is added to each well. The top of the plate is sealed with a transparent plate sealer and a white plate backing sealer is applied to the bottom of the

plate. The degree of methyl 14C-thymidine incorporation is quantified on a Packard Top Count.

Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 45 mg/mL (104.36 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.3191 mL	11.5955 mL	23.1911 mL
5 mM	0.4638 mL	2.3191 mL	4.6382 mL
10 mM	0.2319 mL	1.1596 mL	2.3191 mL
50 mM	0.0464 mL	0.2319 mL	0.4638 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

Kim K, et al. Br J Haematol, 2010, 149(4), 537-549.
Yoon J, et al. Cancer Res, 2011, 71(2), 445-453
Gilmartin AG, Clin Cancer Res, 2011, 17(5), 989-1000.