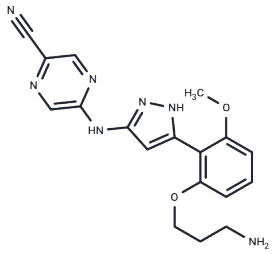
Data Sheet (Cat.No.T4310)

TargetMol

Prexasertib

Chemical Properties



CAS No. : 1234015-52-1

Formula: C18H19N7O2

Molecular Weight: 365.39

Storage: Store at low temperature,The compound is unstable in solution. Please use soon
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	Prexasertib (LY2606368) is a selective checkpoint kinase 1 (CHK1) inhibitor (Ki 0.9 nM, IC50<1 nM). Prexasertib causes double-stranded DNA breaks and replication mutations, leading to apoptosis. Prexasertib has antitumor activity.
Targets(IC50)	Apoptosis,Chk
In vitro	**METHODS**: Human JeKo1, MV4-11, Ramos, RPMI-8226, Z-138 cells were treated with Prexasertib (0-50 μM) for 72 h, and cell growth inhibition was measured by a CellTiter 96 Aqueous One Solution reagent based assay. **RESULTS**: Prexasertib inhibited JeKo1 (IC50=0.004 μM), MV4-11 (IC50=0.004 μM), Ramos (IC50=0.004 μM), RPMI-8226 (IC50=0.048 μM), Z-138 (IC50=0.033) μM) cell growth. [1]
In vivo	**METHODS**: To study the antitumor activity of Prexasertib, mice were subcutaneously injected with Prexasertib (1-10 mg/kg) twice a day for 3 consecutive days followed by a 4-day rest. For three weeks. **RESULTS**: Prexasertib inhibited the growth of tumor xenografts. [2]
Cell Research	LY2606368 is broadly antiproliferative with IC50s of 3 nM, 3 nM, 10 nM, 37 nM, and 68 nM against U-2 OS, Calu-6, HT-29, HeLa, and NCI-H460 cell lines, respectively. LY2606368 (25 μM) exhibits inhibitory activities against proliferation of AGS and MKN1 cells. LY2606368 (20 nM) inhibits HR repair capacity DR-GFP cells.
Animal Research	LY2606368 is formulated in vehicle consisting of 20% Captisol.Female CD-1 nu-/nu- mice (26-28 g) are used for this study. Tumor growth is initiated by subcutaneous injection of 1×106 Calu-6 cells in a 1:1 mixture of serum-free growth medium and Matrigel in the rear flank of each subject animal. When tumor volumes reach approximately 150 mm3 in size, the animals are randomized by tumor size and body weight, and placed into their respective treatment groups. Vehicle consisting of 20% Captisol pH4 or LY2606368 is administered by subcutaneous injection in a volume of 200 μL. Four, eight, 12, 24, and 48 hours after drug administration, blood for plasma drug exposure is extracted via cardiac puncture and assayed on a Sciex API 4000 LC/MS-MS system. The xenograft tissue is promptly removed and prepared. Lysates are analyzed by immunoblot analysis for protein phosphorylation levels. Group means, SEs and P values are calculated using Kronos.

Solubility Information

Solubility	DMSO: 22 mg/mL (60.21 mM),Sonication is recommended. The compound is unstable in solution. Please use soon. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 1 mg/mL (2.74 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	2.7368 mL	13.684 mL	27.368 mL
5 mM	0.5474 mL	2.7368 mL	5.4736 mL
10 mM	0.2737 mL	1.3684 mL	2.7368 mL
50 mM	0.0547 mL	0.2737 mL	0.5474 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

Tong L, et al. Discovery of (R)-5-((5-(1-methyl-1H-pyrazol-4-yl)-4-(methylamino)pyrimidin-2-yl)amino)-3-(piperidin-3-yloxy)picolinonitrile, a novel CHK1 inhibitor for hematologic malignancies. Eur J Med Chem. 2019 Jul 1;173:44-62.

King C, et al. LY2606368 Causes Replication Catastrophe and Antitumor Effects through CHK1-Dependent Mechanisms. Mol Cancer Ther. 2015 Sep;14(9):2004-13.