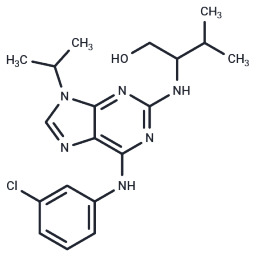
Data Sheet (Cat.No.T2059)

TargetMol

Purvalanol A

Chemical Properties



CAS No. : 212844-53-6

Formula: C19H25ClN6O

Molecular Weight: 388.89

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	Purvalanol A (NG-60) is an effective and cell-permeable CDK inhibitor with IC50 of 70/4/35/850 nM for cdk2-cyclin A/B/E, and cdk4-cyclin D1, respectively.
Targets(IC50)	Apoptosis,CDK,Autophagy
In vivo	In MCF-7 cells, Purvalanol A leads to a 50% reduction in cell viability, while MDA-MB-231 cells exhibit lower sensitivity to Purvalanol A, showing a 32% decrease in cell viability. Purvalanol A induces mitochondrial-mediated apoptosis in both MCF-7 and MDA-MB-231 cells. The compound's effect on reducing the viability of these cell lines is dose-dependent. By inhibiting cell cycle progression and the c-Src signaling pathway, Purvalanol A effectively prevents c-Src-mediated transformation and significantly inhibits anchorage-independent growth in certain human cancer cells with upregulated c-Src. Additionally, Purvalanol A markedly suppresses anchorage-dependent growth in HT29 and SW480 human colorectal cancer cells.
Cell Research	Cells are seeded at 10000 density in 96-well plates and treated with various concentrations of Purvalanol A (0-100 μM) for 24 h. Cells are exposed to 10 μL of 3-(4,5-dimethylthiazol-2-yl)-2,5-diphenyltet- razolium bromide dye (5 mg/mL) and are incubated at 37°C for 4 h. In order to solubilize the formazan crystals 100 μL DMSO is added. Absorbance is determined at 570 nm spectrophotometrically.(Only for Reference)

Solubility Information

Solubility	DMSO: 250 mg/mL (642.86 mM),Sonication is recommended. Ethanol: 19.5 mg/mL (50.14 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Saline: < 10 mg/mL (25.71 mM),Lower concentrations may be soluble, but exact solubility limit is unknown. 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 10 mg/mL (25.71 mM),Solution. *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	2.5714 mL	12.8571 mL	25.7142 mL
5 mM	0.5143 mL	2.5714 mL	5.1428 mL
10 mM	0.2571 mL	1.2857 mL	2.5714 mL
50 mM	0.0514 mL	0.2571 mL	0.5143 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

Gray NS, et al. Science. 1998, 281(5376), 533-538.
Obakan P, et al. Mol Biol Rep. 2014, 41(1), 145-154.
Hikita T, et al. Genes Cells. 2010, 15(10), 1051-1062.