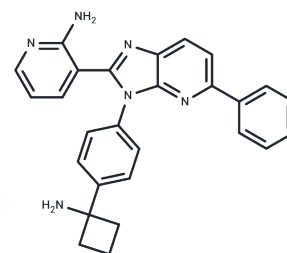


Miransertib

Chemical Properties

CAS No. :	1313881-70-7
Formula:	C ₂₇ H ₂₄ N ₆
Molecular Weight:	432.52
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	Miransertib (ARQ-092) is an orally bioavailable, selective, and potent allosteric Akt inhibitor.
Targets(IC50)	Akt,Parasite
In vitro	Miransertib blocks membrane translocation of inactive AKT and even dephosphorylates the membrane-associated active form, thereby perturbing AKT activity. Treatment with 50-500 nM Miransertib significantly blocks α M β 2 integrin function in neutrophils and reduces P-selectin exposure and glycoprotein Ib/IX/V-mediated agglutination in platelets[2]. In a large panel of diverse cancer cell lines, Miransertib inhibits proliferation across multiple tumor types but are most potent in leukemia, breast, endometrial, and colorectal cancer cell lines. Moreover, inhibition by Miransertib is more prevalent in cancer cell lines containing PIK3CA/PIK3R1 mutations compared to those with wt-PIK3CA/PIK3R1 or PTEN mutations[1]. Miransertib targets the PI3K/AKT pathway and AKT specifically and reduces phosphorylation of GSK3 α and GSK3 β in mutation-positive cells [3].
Cell Research	Cells (MDA-MB-453: 1.5 \times 10 ⁶ ; NCI-H1650: 1 \times 10 ⁶ ; KU-19-19: 0.7 \times 10 ⁶) are plated into 6 well plates, left overnight, and then treated with full media containing different concentrations (0, 0.012, 0.037, 0.11, 0.33, and 1 μ M) of AKT inhibitors (ARQ 092, ARQ 751, MK-2206, GDC-0068) for 2 hours. Cells are treated under designated conditions and lysates are extracted. Proteins are resolved from extracts using SDS-PAGE followed by immunoblotting. (Only for Reference)

Solubility Information

Solubility	DMSO: 12.75 mg/mL (29.48 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: 1 mg/mL (2.31 mM),Sonication is recommended. <i>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.</i>

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.312 mL	11.5602 mL	23.1203 mL
5 mM	0.4624 mL	2.312 mL	4.6241 mL
10 mM	0.2312 mL	1.156 mL	2.312 mL
50 mM	0.0462 mL	0.2312 mL	0.4624 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

Yu Y, et al. PLoS One. 2015, 10(10):e20140479.

Han P, Hou Y, Zhao Y, et al. Low-dose decitabine modulates T cell homeostasis and restores immune tolerance in immune thrombocytopenia. Blood. 2021

Kim K, et al. Haematologica. 2017, 102(2):246-259.

Lindhurst MJ, et al. Sci Rep. 2015, 5:17162.

Han P, Hou Y, Zhao Y, et al. Low-dose decitabine modulates T cell homeostasis and restores immune tolerance in immune thrombocytopenia[J]. Blood. 2021

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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