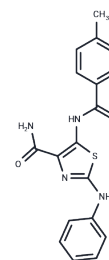


KY-05009

Chemical Properties

CAS No. : 1228280-29-2
 Formula: C₁₈H₁₆N₄O₂S
 Molecular Weight: 352.41
 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	KY-05009 is a chemical compound that effectively suppresses TGF- β 1-induced epithelial-to-mesenchymal transition (EMT) in human lung adenocarcinoma cells, reduces TNIK protein expression and the transcriptional activity of Wnt target genes, and promotes apoptosis in cancer cells, displaying anti-cancer properties. Furthermore, it functions as an ATP-competitive Traf2- and Nck-interacting kinase (TNIK) inhibitor with a K _i of 100 nM.
Targets(IC50)	Apoptosis,MAPK,Wnt/beta-catenin
In vitro	KY-05009 (1-3 μ M; 48-72 hours; RPMI8226 cells) treatment induces caspase-dependent apoptosis in RPMI8226 cells in a dose-dependent manner. KY-05009 (3 μ M; 1 hour; RPMI8226 cells) treatment suppresses the transcriptional activity of Wnt signaling-related genes, including TNIK, CTNNB1, TCF7, and TCF4. KY-05009 (3 μ M; 9 hours; RPMI8226 cells) treatment inhibits the IL-6-induced interaction between TCF4 and β -catenin and the phosphorylation of TCF4. KY-05009 (0.1-30 μ M; 24 hours; RPMI8226 cells) treatment inhibits the proliferation of RPMI8226 cells in a dose-dependent manner.

Solubility Information

Solubility	DMSO: 45 mg/mL (127.69 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: 2 mg/mL (5.68 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	2.8376 mL	14.188 mL	28.376 mL
5 mM	0.5675 mL	2.8376 mL	5.6752 mL
10 mM	0.2838 mL	1.4188 mL	2.8376 mL
50 mM	0.0568 mL	0.2838 mL	0.5675 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

Lee Y, et al. Synergistic inhibition effect of TNIK inhibitor KY-05009 and receptor tyrosine kinase inhibitor dovitinib on IL-6-induced proliferation and Wnt signaling pathway in human multiple myeloma cells. *Oncotarget*. 2017 Jun 20;8(25):41091-41101.

Zheng M, Zhai Y, Yu Y, et al. TNF compromises intestinal bile-acid tolerance dictating colitis progression and limited infliximab response. *Cell Metabolism*. 2024

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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