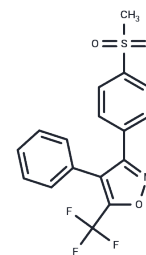


CAY10404

Chemical Properties

CAS No. : 340267-36-9
 Formula: C₁₇H₁₂F₃N₃O₃
 Molecular Weight: 367.34
 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	CAY10404 (3-(4-METHYLSULPHONYLPHENYL)-4-PHENYL-5-T) is a potent and highly selective inhibitor of COX-2 and COX-1. It is also a potent inhibitor of PKB/Akt and MAPK signalling pathways and induces apoptosis in NSC-LC cells, with analgesic, anti-inflammatory and anti-cancer activities.
Targets(IC50)	Apoptosis,Akt,COX
In vitro	Treatment with CAY10404 in the range of 10-100 microM caused dose-dependent growth inhibition, with an average 50% inhibitory concentration (IC(50)) of 60-100 micromol/L, depending on the cell line. Western blot analysis of CAY10404-treated cells showed cleavage of poly (ADP-ribose) polymerase (PARP) and procaspase-3, signifying caspase activity and apoptotic cell death. CAY10404 treatment inhibited the phosphorylation of Akt, glycogen synthase kinase-3beta and extracellular signal-regulated kinases 1/2 in H460 and H358 cells[1]
Cell Research	To measure the effects of CAY10404 on proliferation of NSCLC cells, 3 x 10(3) cells/well were plated in 96-well plates and allowed to adhere overnight at 37 degrees C. After treatment with CAY10404 for 3 days, cell proliferation was measured by the 3- (4,5-dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide (MTT) assay. In the H460 NSCLC cells, evidence of apoptosis was sought using the terminal deoxynucleotidyl transferase deoxyuridine triphosphate (dUTP) nick end labelling (TUNEL) assay and western blot analysis[1].

Solubility Information

Solubility	DMSO: 10 mg/mL (27.22 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+90% Corn Oil: 1 mg/mL (2.72 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	2.7223 mL	13.6114 mL	27.2227 mL
5 mM	0.5445 mL	2.7223 mL	5.4445 mL
10 mM	0.2722 mL	1.3611 mL	2.7223 mL
50 mM	0.0544 mL	0.2722 mL	0.5445 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

Yongseon Cho, et al. Effects of CAY10404 on the PKB/Akt and MAPK pathway and apoptosis in non-small cell lung cancer cells. *Respirology*. 2009 Aug;14(6):850-8.

Joshua A Robertson, et al. The role of cyclooxygenase-2 in mechanical ventilation-induced lung injury. *Am J Respir Cell Mol Biol*. 2012 Sep;47(3):387-94.

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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