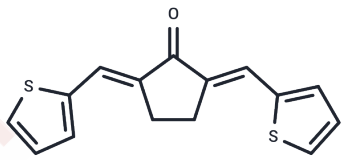
Data Sheet (Cat.No.T1927)

TargetMol

CCT007093

Chemical Properties



CAS No. : 176957-55-4

Formula: C15H12OS2

Molecular Weight: 272.39

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	CCT007093 is an effective PPM1D (WIP1) inhibitor (IC50: 8.4 μM).
Targets(IC50)	Apoptosis,Autophagy,Phosphatase
In vivo	CCT007093, when used in combination with Paclitaxel, synergistically inhibits four Paclitaxel-resistant triple-negative breast cancer cell lines. CCT007093 selectively exhibits significant inhibition on human tumor cell lines over-expressing PPM1D (MCF-7, KPL-1, and MCF-3B). By activating p38 kinase activity, CCT007093 induces cell death. It selectively promotes apoptosis in breast cancer cells and ectopically expressed Wip1 in keratinocytes, while reducing UV-mediated apoptotic responses in Wip1-deficient naked cells and a skin keratinocyte model.
Kinase Assay	In vitro phosphatase assay: Recombinant PPM1D (20-50?pmol) is diluted in Tris buffer (50?mM, pH 8), NaCl (100?mM), β-mercaptoethanol (1?mM) or DTT (1?mM) and treated with MnCl2 (0, 1, 10 and 20?mM) or MgCl2 (0 and 40?mM). Where appropriate, inhibitors of PPM1D (10-50?μM) are added and the assay mix incubated for 30?min at room temperature. Recombinant phospho-P38 (200?pmol) is then added and the mixture incubated at 37°C for 1?h. The reaction is quenched by the addition of excess ethylenediaminetetraacetic acid (EDTA), sodium dodecyl sulphate-sample loading buffer and boiling for 5?min at 95°C followed by gel electrophoresis and western blotting.
Cell Research	Cells are transfected with a pSUPER plasmid and an additional plasmid expressing the blasticidin resistance gene (pEFBsd) in a molar ratio of 10:1. Cells are plated in 10?cm plates 24?h after transfection. Blasticidin selection (5?μg/ml) is initiated 48?h post-transfection and replenished every 3 days. Colonies are fixed in methanol and stained with crystal violet after 14 days. Colonies are quantified on a Colcount and the surviving fraction (SF) determined.(Only for Reference)

Solubility Information

Solubility	DMSO: 1.38 mg/mL (5.07 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	3.6712 mL	18.356 mL	36.7121 mL
5 mM	0.7342 mL	3.6712 mL	7.3424 mL
10 mM	0.3671 mL	1.8356 mL	3.6712 mL
50 mM	0.0734 mL	0.3671 mL	0.7342 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

Rayter S, et al. Oncogene. 2008, 27(8), 1036-1044.
Bauer JA, et al. Breast Cancer Res. 2010, 12(3), R41.
Lee JS, et al. J Dermatol Sci. 2014, 73(2), 125-134.