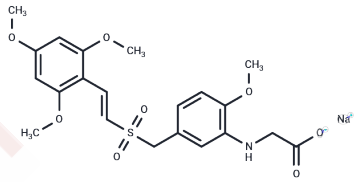
Data Sheet (Cat.No.T5818)

TargetMol

Rigosertib sodium

Chemical Properties



CAS No. : 592542-60-4

Formula: C21H24NNaO8S

Molecular Weight: 473.47

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	Rigosertib sodium (ON-01910), a non-ATP-competitive inhibitor of PLK1(IC50=9 nM), exhibits 30-fold higher specificity activity over Plk2 and no effect on Plk3.
Targets(IC50)	Apoptosis,PI3K,PLK
Kinase Assay	In vitro enzyme assays for PLK1: Recombinant PLK1 (10 ng) is incubated with different concentrations of Rigosertib in a 15 μL reaction mixture (50 mM HEPES, 10 mM MgCl2, 1 mM EDTA, 2 mM Dithiothreitol, 0.01% NP-40 [pH 7.5]) for 30 min at room temperature. Kinase reactions are performed for 20 min at 30 °C in a volume of 20 μL (15 μL enzyme + inhibitor, 2 μL 1 mM ATP), 2 μL of γ32P-ATP (40 μCi), and 1 μL of recombinant Cdc25C (100 ng) or casein (1 μg) substrates. Reactions are terminated by boiling for 2 min in 20 μL of 2× Laemmli buffer. Phosphorylated substrates are separated by 18% SDS-PAGE. The gels are dried and exposed to X-ray film for 3-10 min.
Cell Research	Cells are grown in either DMEM or RPMI supplemented with 10% fetal bovine serum and 1 unit/mL penicillin-streptomycin solution. Tumor cells are plated into six-well dishes at a density of 1 × 105cells/mL/well, and Rigosertib is added 24 hours later at various concentrations. Cell counts are determined from duplicate wells after 96-hour of treatment. The total number of viable cells is determined by trypan blue exclusio(Only for Reference)

Solubility Information

Solubility	H2O: 87 mg/mL (183.75 mM),Sonication is recommended. Ethanol: < 1 mg/mL (insoluble or slightly soluble), DMSO: 88 mg/mL (185.86 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: 5 mg/mL (10.56 mM),Sonication is recommended. *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	2.1121 mL	10.5603 mL	21.1207 mL
5 mM	0.4224 mL	2.1121 mL	4.2241 mL
10 mM	0.2112 mL	1.056 mL	2.1121 mL
50 mM	0.0422 mL	0.2112 mL	0.4224 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

Gumireddy K, et al. Cancer Cell, 2005, 7(3), 275-286.
Reddy MV, et al. J Med Chem, 2011, 54(18), 6254-6276.
Chapman CM, et al. Clin Cancer Res, 2012 18(7), 1979-1991.