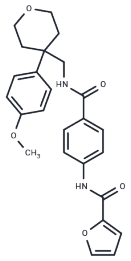
Data Sheet (Cat.No.T1807)

TargetMol

JW 55

Chemical Properties



CAS No. : 664993-53-7

Formula: C25H26N2O5

Molecular Weight: 434.48

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	JW 55 (JW55) is an effective and selective β-catenin signaling pathway inhibitor, works by inhibition of the PARP domain of tankyrase 1 and tankyrase 2 (TNKS1/2).
Targets(IC50)	PARP,Wnt/beta-catenin
In vitro	JW 55 (JW55) is a potent and selective inhibitor of the canonical Wnt pathway. Wnt3a-induced HEK293 cells containing a transiently transfected ST-Luc (SuperTop-luciferase) reporter show inhibition by JW55 with an IC50 value of 470 nM. JW55 is effective in the range of 1 to 5 μM in SW480 cells and 0.01 to 5 μM in HCT-15 cells. JW55 is effective in the range of 1 to 5 μM in SW480 cells and 0.01 to 5 μM in HCT-15 cells[1].
In vivo	JW 55 (100 mg/kg, orally) reduces tumor development in conditional Apc knockout mice. JW55 reduces XWnt8-induced axis duplication inXenopus embryos and Tamoxifen-induced polyposis formation in conditional APC mutant mice[1].
Cell Research	JW 55 (JW55) is prepared in DMSO and stored, and then diluted with appropriate medium [1]. A total of 1,000 SW480 or RKO cells are seeded in 96-well plates. The day after, the cell culture medium is exchanged to solutions that contained 0.1% DMSO or 10 μM JW55 for RKO cells and 0.1% DMSO or 10, 5, or 1 μM JW55 for SW480 cells. All samples consist of a minimum of 6 replicates. The plate is incubated in an IncuCyte inside a cell culture incubator. Images are captured every second hour to monitor proliferation[1].

Solubility Information

Solubility	Ethanol: 100 mM,Sonication is recommended. DMSO: 50 mg/mL (115.08 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 (4.6 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	2.3016 mL	11.508 mL	23.016 mL
5 mM	0.4603 mL	2.3016 mL	4.6032 mL
10 mM	0.2302 mL	1.1508 mL	2.3016 mL
50 mM	0.046 mL	0.2302 mL	0.4603 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

Waaler J, et al. A novel tankyrase inhibitor decreases canonical Wnt signaling in colon carcinoma cells and reduces tumor growth in conditional APC mutant mice. Cancer Res. 2012 Jun 1;72(11):2822-32.