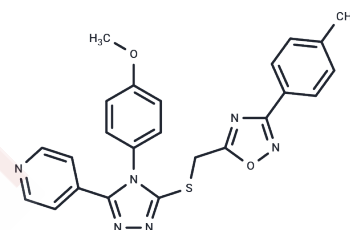


JW74

## Chemical Properties

CAS No. : 863405-60-1  
 Formula: C<sub>24</sub>H<sub>20</sub>N<sub>6</sub>O<sub>2</sub>S  
 Molecular Weight: 456.52  
 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	JW74 antagonizes LiCl-induced activation of the canonical Wnt signaling pathway (IC <sub>50</sub> : 420 nM).
Targets(IC <sub>50</sub> )	Wnt/beta-catenin
In vitro	Ki-67 expression is reduced from 97.5% in DMSO-treated cells to 86.7% in JW74-treated cells. Relative to DMSO-treated cells, the cellular viability of U2OS cells treated for 72 h treatment with 10 μM JW74 is reduced to 80%. The effect of tankyrase inhibition on cellular viability is tested by performing an MTS assay. Flow cytometry is also performed to determine the expression marker Ki-67 in U2OS following 48 h treatment with DMSO or 10 μM JW74 [2]. JW74 displays a reduction of canonical Wnt signaling in the ST-Luc assay (IC <sub>50</sub> : 790 nM) [1].
In vivo	The in vivo efficacy of JW74 is evaluated using SW480 cell xenografts, with high doses (150 or 300 mg/kg) administered due to rapid degradation in the organism, as shown by human liver microsome analysis (t <sub>1/2</sub> =2.5 minutes) and pharmacokinetic analyses (t <sub>1/2</sub> =30 minutes after peroral injections and t <sub>1/2</sub> =15 minutes after intravenous injections). JW74 concentrations in tumors range from 4.2 to 72.1 μmol/kg for 150 mg/kg, 1.9 to 11.1 μmol/kg for 300 mg/kg, and reach 2.8 μM in plasma for both doses [1].

## Solubility Information

Solubility	DMSO: 45 mg/mL (98.57 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 (4.38 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

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	1mg	5mg	10mg
1 mM	2.1905 mL	10.9524 mL	21.9048 mL
5 mM	0.4381 mL	2.1905 mL	4.381 mL
10 mM	0.219 mL	1.0952 mL	2.1905 mL
50 mM	0.0438 mL	0.219 mL	0.4381 mL

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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

Waalder J, et al. Novel synthetic antagonists of canonical Wnt signaling inhibit colorectal cancer cell growth. *Cancer Res.* 2011 Jan 1;71(1):197-205.

Stratford EW, et al. The tankyrase-specific inhibitor JW74 affects cell cycle progression and induces apoptosis and differentiation in osteosarcoma cell lines. *Cancer Med.* 2014 Feb;3(1):36-46.

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