# PRODUCT INFORMATION

## JW 74

*Item No. 19124*

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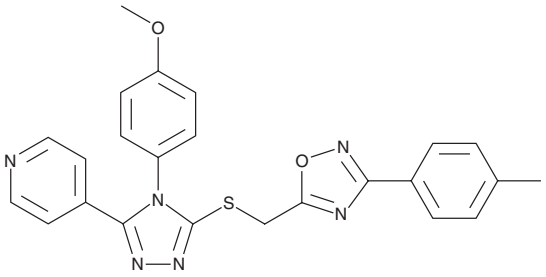
| **CAS Registry No.:** | 863405-60-1 |
| **Formal Name:** | 4-[4-(4-methoxyphenyl)-5-[[[3-(4-methylphenyl)-1,2,4-oxadiazol-5-yl]methyl]thio]-4H-1,2,4-triazol-3-yl]-pyridine |
| **MF:** | $C_{24}H_{20}N_6O_2S$ |
| **FW:** | 456.5 |
| **Purity:** | ≥98% |
| **UV/Vis.:** | $\lambda_{max}$: 232 nm |
| **Supplied as:** | A crystalline solid |
| **Storage:** | -20°C |
| **Stability:** | ≥4 years |



*Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.*

### Laboratory Procedures

JW 74 is supplied as a crystalline solid. A stock solution may be made by dissolving the JW 74 in the solvent of choice, which should be purged with an inert gas. JW 74 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of JW 74 in these solvents is approximately 20mg/ml.

JW 74 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, JW 74 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. JW 74 has a solubility of approximately 0.16 mg/ml in a 1:5 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Tankyrases (TNKS) are poly(ADP-ribose) polymerases (PARPs) that cleave $NAD^+$ to produce nicotinamide and ADP-ribose, which is then covalently attached to an acceptor protein in a process known as poly(ADP-ribosyl)ation. TNKS have key roles in the Wnt signaling pathway as part of the β-catenin destruction complex. JW 74 is an inhibitor of the catalytic PARP domain of TNKS1/2 that blocks canonical Wnt signaling with an $IC_{50}$ value of 790 nM.[1,2] It increases the levels of Axin2 and decreases β-catenin levels in colorectal cancer (CRC) cells, leading to down-regulation of Wnt target genes.[2] JW 74 inhibits the growth of CRC xenograft tumors in mice.[2] JW 74 induces apoptosis and differentiation in osteosarcoma cell lines.[1]

### References


1. Stratford, E.W., Daffinrud, J., Munthe, E., *et al*. The tankyrase-specific inhibitor JW74 affects cell cycle progression and induces apoptosis and differentiation in osteosarcoma cell lines. *Cancer Med*. **3(1)**, 36-46 (2014).
2. Waaler, J., Machon, O., von Kries, J.P., *et al*. Novel synthetic antagonists of canonical Wnt signaling inhibit colorectal cancer cell growth. *Cancer Res*. **71(1)**, 197-205 (2011).





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