# Data Sheet (Cat.No.T61728)

MY-875

## Chemical Properties

CAS No. :

Formula: C21H25NO6

Molecular Weight: 387.43

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

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| Description | MY-875 is a potent microtubulin polymerization inhibitor that competes at colchicine binding sites, exhibiting an IC50 value of 0.92 μM. It effectively suppresses microtubulin polymerization, exerting its inhibitory effect. Additionally, MY-875 exerts its biological impact by activating the Hippo pathway, inducing apoptosis, and displaying commendable anticancer activity [1]. |
| Targets(IC50) | Apoptosis,Others,Microtubule Associated |
| In vitro | MY-875 (0-80 μM, 48 h) exhibits significant anti-proliferative activity against cancer cells [1]. At concentrations of 1-10 μM, MY-875 inhibits microtubule protein polymerization with an IC50 of 0.92 μM, while also preventing the alkylation of β-tubulin and formation of EBI-β-tubulin adduct bands dosedependently [1]. MY-875 (0-45 nM, 48 h) induces the phosphorylation of MST (Ste20-like kinases) and LATS (large tumor suppressor kinases), leading to YAP (Yes-associated protein) degradation [1]. Additionally, MY-875 (0-45 nM, 24 h) significantly impairs cell colony-forming ability, induces G2/M phase arrest, and triggers apoptosis in a dose-dependent manner [1].<br><br>**Cell Proliferation Assay [1]**<br>- **Cell Line:** MGC-803, HCT-116, KYSE450, HGC-27, SGC-7901<br>- **Concentration:** 0-80 μM<br>- **Incubation Time:** 48 hours<br>- **Result:** Inhibited proliferation with IC50 values of 0.027, 0.055, 0.067, 0.033, and 0.025 μM respectively. Also showed strong inhibitory effects on other tumor cell lines (e.g., DU145, A549, MCF-7) with IC50 < 0.1 μM.<br><br>**Cell Cycle Analysis [1]**<br>- **Cell Line:** MGC-803, SGC-7901<br>- **Concentration:** 0-45 nM<br>- **Incubation Time:** 24 hours<br>- **Result:** Increased G2/M phase cell percentage from 19.38% to 76.97% in MGC-803 and from 7.04% to 80.89% in SGC-7901 at 45 nM.<br><br>**Apoptosis Analysis [1]**<br>- **Cell Line:** MGC-803, SGC-7901<br>- **Concentration:** 0-45 nM<br>- **Incubation Time:** 48 hours |

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| In vitro | - **Result:** Increased apoptotic cell percentage from 21.96% to 76.08% in MGC-803 and from 9.28% to 63.51% in SGC-7901 at 45 nM, while reducing expression of anti-apoptotic proteins c-IAP1, Bcl-xL, and Mcl-1. |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 2.5811 mL | 12.9056 mL | 25.8111 mL |
| 5 mM | 0.5162 mL | 2.5811 mL | 5.1622 mL |
| 10 mM | 0.2581 mL | 1.2906 mL | 2.5811 mL |
| 50 mM | 0.0516 mL | 0.2581 mL | 0.5162 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.