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Lieferung & Zahlungsart

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Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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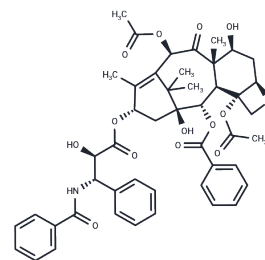
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Paclitaxel

Chemical Properties

| | |
|-------------------|---|
| CAS No. : | 33069-62-4 |
| Formula: | C ₄₇ H ₅₁ NO ₁₄ |
| Molecular Weight: | 853.91 |
| Appearance: | no data available |
| Storage: | keep away from direct sunlight,store at low temperature Powder: -20°C for 3 years In solvent: -80°C for 1 year |



Biological Description

| | |
|---------------|---|
| Description | Paclitaxel (Taxol) is a natural product and a microtubule polymer stabilizer. Paclitaxel has anti-tumor activity and causes cell death by inducing mitotic arrest, apoptosis, and cell autophagy. |
| Targets(IC50) | Apoptosis, Microtubule Associated, Autophagy, ADC Cytotoxin |
| In vitro | <p>METHODS: Human T-cell lymphoblastic leukemia cells CCRF-HSB-2 were treated with Paclitaxel (0.01-1 μM) for 48 h. Cell growth inhibition was detected by MTT.</p> <p>RESULTS: Paclitaxel dose-dependently inhibited the growth of CCRF-HSB-2 cells with an IC₅₀ of 0.25 μM. [1]</p> <p>METHODS: Human gastric cancer cells AGS were treated with Paclitaxel (10-160 nM) for 24-48 h. The expression levels of target proteins were detected by Western Blot.</p> <p>RESULTS: Paclitaxel induced the up-regulation of the expression of cleaved caspase-3 and cleaved PARP, which are apoptosis-related proteins. [2]</p> <p>METHODS: Canine mammary tumor cells CHMm were treated with Paclitaxel (0.01-1 μM) for 24 h. Apoptosis was detected using Flow Cytometry.</p> <p>RESULTS: Paclitaxel dose-dependently induced apoptosis in CHMm cells. [3]</p> |
| In vivo | <p>METHODS: To investigate the effect of low-dose Paclitaxel on tumor invasion, Paclitaxel (2.6 mg/kg) was administered intraperitoneally to SCID mice bearing cholangiocarcinoma tumor EGI-1 once daily for two weeks.</p> <p>RESULTS: Low-dose Paclitaxel treatment reduced the pulmonary spread of EGI-1 cells without significantly affecting their local tumor growth. [4]</p> <p>METHODS: To develop a preclinical model of Paclitaxel alcohol-induced negative affective symptoms, Paclitaxel (2-8 mg/kg in 1 volume ethanol+1 volume Emulphor-620 +18 volumes distilled water) was injected intraperitoneally into C57BL/6j mice every four injections were given to C57BL/6j mice once every two days.</p> <p>RESULTS: 8 mg/kg Paclitaxel treatment resulted in the development and maintenance of mechanical and cold abnormalities of pain. Paclitaxel also induced anxiety-like and depressive-like behaviors. Paclitaxel produced behavioral changes in the mouse affective state modeling assay, whereas the increase in injurious responses lasted longer. [5]</p> |
| Kinase Assay | To determine which caspases are involved in apoptosis induced by taxol, caspase-3 inhibitor (DEVD-CHO), caspase-6 inhibitor (Z-VEID-FMK), caspase-8 inhibitor (Z-IETD-FMK or IETD-CHO), caspase-9 inhibitors (Z-LEHD-FMK or LEHD-CHO), and caspase-10 |

inhibitor (Z-AEVD-FMK) are used. These caspase inhibitors are dissolved in dimethyl sulfoxide (Me2SO); the final concentration of Me2SO is 0.1%. Cells (5×10^5) are preincubated in the presence or absence of 100 μM each of these inhibitors for 3 h at 37°C then treated with or without 0.1, 0.5, and 1 μM Paclitaxel for 48 h and processed for annexin V binding assay [1].

| | |
|-----------------|---|
| Cell Research | 1×10^4 cells are plated in 100 μL of the growth medium in the presence or absence of increasing concentrations (0.1-1 μM) of taxol in 96-well plates and cultured at 37°C in 5% CO ₂ for 12-48 h. The cells are then incubated with 25 μL of MTT (5 mg/mL) at 37°C for 4 h. After dissolving the crystals with 0.04 N HCl in isopropanol, the plates are read in a microplate reader at 570 nm [1]. |
| Animal Research | Adult (250-320 g) male Sprague-Dawley rats are used for all experiments. One week following the Dil injection, rats are anesthetized with isofluorane and injected into the tail vein with 2 mg/kg paclitaxel or its vehicle (1:1:23, cremophor EL:ethanol:0.9% saline). The tail vein injection is repeated three more times every other day for a total of four injections [4]. |

Solubility Information

| | |
|------------|--|
| Solubility | Ethanol: 21.4 mg/mL (25 mM), DMSO: 85.4 mg/mL (100 mM), Heating is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble) |
|------------|--|

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|-------|-----------|-----------|------------|
| 1 mM | 1.1711 mL | 5.8554 mL | 11.7108 mL |
| 5 mM | 0.2342 mL | 1.1711 mL | 2.3422 mL |
| 10 mM | 0.1171 mL | 0.5855 mL | 1.1711 mL |
| 50 mM | 0.0234 mL | 0.1171 mL | 0.2342 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.

Reference

Gritsina G, Fong K, Lu X, et al. Chemokine receptor CXCR7 activates AURKA and promotes neuroendocrine prostate cancer growth. *The Journal of Clinical Investigation*. 2023
Park Sj, et al. Taxol induces caspase-10-dependent

Inhibitor · Natural Compounds · Compound Libraries · Recombinant Proteins

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