Paclitaxel belongs to the taxane family of antitumor and antileukemic agents (3). By binding to β-tubulin and promoting the assembly of microtubules, paclitaxel prevents microtubule depolymerization and blocks normal cell division (1-3). The microtubule dysfunction induced by paclitaxel results in aberrant cell mitosis and sometimes apoptosis. The IC50 of paclitaxel-induced mitotic block is 4 nM (4).

Molecular Formula: C47H51NO14
Molecular Weight: 853.9 g/mol
Purity: >99.5%
CAS: 33069-62-6
Solubility: Soluble in DMSO at 25mg/ml or EtOH at 20mg/ml.

Storage: Store lyophilized or in solution at -20°C, desiccated. Protect from light. In lyophilized form, the chemical is stable for 24 months. Once in solution, use within 3 months to prevent loss of potency. Aliquot to avoid multiple freeze/thaw cycles.

Directions for Use: Paclitaxel is supplied as a 1 mg powder. Store at or below -20°C. Before use, dissolve powder in 1.15 ml DMSO to make a 1 mM paclitaxel stock solution. For working concentrations of 100 nM-1000 nM, dilute DMSO stock 1:10,000 to 1:1000. Treat cells with the desired concentration for 6-48 hours.

References:

Cross-Reactivity Key:
- H: human
- M: mouse
- R: rat
- Hm: hamster
- Mk: monkey
- V: virus
- Mi: mink
- C: chicken
- Dm: D. melanogaster
- X: Xenopus
- Z: zebrafish
- B: bovine
- Dg: dog
- P: pig
- Sc: S. cerevisiae
- Ce: C. elegans
- Hr: horse
- GP: Guinea Pig
- Rab: rabbit
- All: all species expected

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