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Docetaxel-PNP

National Cancer Institute

Source

National Cancer Institute. *Docetaxel-PNP*. NCI Thesaurus. Code C91087.

A polymeric nanoparticle (PNP) formulation containing the taxane docetaxel, a semi-synthetic analogue of paclitaxel, with antineoplastic activity. Docetaxel binds specifically to the beta-tubulin subunit of the microtubule, stabilizing tubulin and inhibiting microtubule disassembly, which results in cell-cycle arrest at the G2/M phase, preventing cell proliferation. This agent also inhibits pro-angiogenic factors such as vascular endothelial growth factor (VEGF) and induces various mediators of the inflammatory response. Compared to docetaxel alone, the PNP formulation may enhance stability and improve delivery.