

[Open Peer Review on Qeios](#)

# Docetaxel Lipid Microspheres

National Cancer Institute

## Source

National Cancer Institute. *Docetaxel Lipid Microspheres*. NCI Thesaurus. Code C102568.

A lipid microsphere (LM)-based formulation containing the poorly water soluble 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 causes cell cycle arrest at the G2/M phase and leads to cell death. 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 LM formulation may enhance stability, improve efficacy and may reduce toxicity; this formulation does not contain toxic detergents needed to solubilize docetaxel which further improves its side effect profile.