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Phosphaplatin PT-112

National Cancer Institute

Source

National Cancer Institute. *Phosphaplatin PT-112*. NCI Thesaurus. Code C121375.

A platinum (Pt)-based agent belonging to the phosphaplatin family comprised of Pt complexed to a pyrophosphate ligand, with potential antineoplastic activity. Although the exact mechanisms through which PT-112 exerts its effect have yet to be fully elucidated, this agent, upon intravenous administration, binds to certain transmembrane proteins and activates several genes involved in tumor suppression and apoptosis. This leads to the activation of various signal transduction pathways, induces S/G2 phase cell cycle, and causes tumor cell apoptosis. In addition, PT-112 may inhibit angiogenesis. Unlike conventional Pt-based chemotherapeutics, PT-112 does not bind to DNA and is able to overcome drug resistance, which occurs with conventional Pt-based chemotherapeutics; it also has a more favorable side effect profile and is more stable in plasma.