

[Open Peer Review on Qeios](#)

Aldoxorubicin

National Cancer Institute

Source

National Cancer Institute. *Aldoxorubicin*. NCI Thesaurus. Code C68921.

A 6-maleimidocaproyl hydrazone derivative prodrug of the anthracycline antibiotic doxorubicin (DOXO-EMCH) with antineoplastic activity. Following intravenous administration, aldoxorubicin binds selectively to the cysteine-34 position of albumin via its maleimide moiety. Doxorubicin is released from the albumin carrier after cleavage of the acid-sensitive hydrazone linker within the acidic environment of tumors and, once located intracellularly, intercalates DNA, inhibits DNA synthesis, and induces apoptosis. Albumin tends to accumulate in solid tumors as a result of high metabolic turnover, rapid angiogenesis, hypervascularity, and impaired lymphatic drainage. Because of passive accumulation within tumors, this agent may improve the therapeutic effects of doxorubicin while minimizing systemic toxicity.