

[Open Peer Review on Qeios](#)

# Folate Receptor-Targeted Vinca Alkaloid/Mitomycin C EC0225

National Cancer Institute

## Source

National Cancer Institute. *Folate Receptor-Targeted Vinca Alkaloid/Mitomycin C EC0225*.  
NCI Thesaurus. Code C66987.

A folate receptor-targeting cytotoxic agent with potential antineoplastic activity. Folate receptor-targeted vinca alkaloid/mitomycin C EC0225 contains two potent cytotoxic agents, a vinca alkaloid and mitomycin C, linked to a single folate molecule. Mediated through the folate moiety, this agent delivers the cytotoxic agents directly into cells expressing folic acid receptors, frequently upregulated in many types of tumor cells. After ligand-receptor internalization, the vinca alkaloid moiety binds to tubulin and disrupts microtubule assembly-disassembly dynamics, resulting in cell cycle arrest and apoptosis. Mitomycin C alkylates DNA, producing DNA cross-links and inhibiting DNA replication. The relative tumor cell specificity of EC0225 reduces the toxicity profiles of its cytotoxic agent moieties.