

[Open Peer Review on Qeios](#)

PI3K/mTOR Kinase Inhibitor WXFL10030390

National Cancer Institute

Source

National Cancer Institute. *PI3K/mTOR Kinase Inhibitor WXFL10030390*. NCI Thesaurus. Code C159499.

An orally bioavailable, small molecule inhibitor of certain phosphoinositide 3-kinase (PI3K) isoforms and mammalian target of rapamycin kinase (mTOR) in the PI3K/mTOR signaling pathway, with potential antineoplastic activity. Upon oral administration, PI3K/mTOR inhibitor WXFL10030390 (WX390) inhibits mTOR kinase and certain PI3K isoforms. Consequently, this disrupts phosphorylation of substrates downstream of PI3K and mTOR and may result in apoptosis and growth inhibition in susceptible tumor cells. The PI3K/mTOR pathway is upregulated in a variety of tumor cells and plays a key role in promoting cancer cell proliferation, and survival, motility and resistance to chemotherapy and radiotherapy. mTOR, a serine/threonine kinase downstream of PI3K, may also be activated in a PI3K-independent fashion; therefore, this agent may be more potent than an agent that inhibits either PI3K or mTOR alone.