Bimiralisib

National Cancer Institute

Source

National Cancer Institute. Bimiralisib. NCI Thesaurus. Code C111898.

An orally bioavailable pan inhibitor of phosphoinositide-3-kinases (PI3K) and inhibitor of the mammalian target of rapamycin (mTOR), with potential antineoplastic activity. Bimiralisib inhibits the PI3K kinase isoforms alpha, beta, gamma and delta and, to a lesser extent, mTOR kinase, which may result in tumor cell apoptosis and growth inhibition in cells overexpressing PI3K/mTOR. Activation of the PI3K/mTOR pathway promotes cell growth, survival, and resistance to both chemotherapy and radiotherapy. As mTOR, a serine/threonine kinase downstream of PI3K, may also be activated independent of PI3K, this agent may potentially be more potent than an agent that inhibits either PI3K kinase or mTOR kinase. By inhibiting mTOR to a lesser extent than PI3K, PQR309 does not interfere with the mTOR-mediated negative feedback loop on PI3K signaling. Blocking the negative feedback loop would potentially increase PI3K signaling and decrease therapeutic efficacy.