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MTORC 1/2 Inhibitor LXI-15029

National Cancer Institute

Source

National Cancer Institute. *mTORC 1/2 Inhibitor LXI-15029*. NCI Thesaurus. Code C148528.

An orally bioavailable inhibitor of raptor-mammalian target of rapamycin (mTOR) complex 1 (mTOR complex 1; mTORC1) and rictor-mTOR complex 2 (mTOR complex 2; mTORC2), with potential antineoplastic activity. Upon oral administration, mTORC1/2 inhibitor LXI-15029 binds to the kinase domain of mTOR and inhibits both mTORC1 and mTORC2, in an ATP-competitive manner. This inhibits mTOR-mediated signaling and leads to both an induction of apoptosis and a decrease in the proliferation of mTORC1/2-expressing tumor cells. mTOR is a serine/threonine kinase that is upregulated in certain tumor cell types. It plays an important role in the PI3K/Akt/mTOR signaling pathway, which is often deregulated in cancer cells and promotes cell growth, survival, and resistance to chemotherapy and radiotherapy.