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Cordycepin

National Cancer Institute

Source

National Cancer Institute. *Cordycepin*. NCI Thesaurus. Code C1057.

A purine nucleoside antimetabolite and antibiotic isolated from the fungus *Cordyceps militaris* with potential antineoplastic, antioxidant, and anti-inflammatory activities. Cordycepin is an inhibitor of polyadenylation, activates AMP-activated protein kinase (AMPK) and reduces mammalian target of rapamycin (mTOR) signaling, which may result in both the induction of tumor cell apoptosis and a decrease in tumor cell proliferation. mTOR, a serine/threonine kinase belonging to the phosphatidylinositol 3-kinase (PI3K)-related kinase (PIKK) family, plays an important role in the PI3K/AKT/mTOR signaling pathway that regulates cell growth and proliferation, and its expression or activity is frequently dysregulated in human cancers.