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Filanesib

National Cancer Institute

Source

National Cancer Institute. *Filanesib*. NCI Thesaurus. Code C68937.

A synthetic, small molecule targeting the kinesin spindle protein (KSP) with potential antineoplastic activity. Filanesib specifically inhibits KSP (kinesin-5 or Eg5), resulting in activation of the spindle assembly checkpoint, induction of cell cycle arrest during the mitotic phase, and consequently cell death in tumor cells that are actively dividing. Because KSP is not involved in postmitotic processes, such as neuronal transport, this agent does not cause the peripheral neuropathy that is often associated with tubulin-targeting agents. KSP is an ATP-dependent microtubule motor protein that is essential for the formation of bipolar spindles and the proper segregation of sister chromatids during mitosis.