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Tomivosertib

National Cancer Institute

Source

National Cancer Institute. *Tomivosertib*. NCI Thesaurus. Code C125062.

An orally bioavailable inhibitor of mitogen-activated protein kinase (MAPK)-interacting serine/threonine-protein kinase 1 (MNK1) and 2 (MNK2), with potential antineoplastic activity. Upon oral administration, tomivosertib binds to and inhibits the activity of MNK1 and 2. This prevents MNK1/2-mediated signaling, and inhibits the phosphorylation of certain regulatory proteins, including eukaryotic translation initiation factor 4E (eIF4E), that regulate the translation of messenger RNAs (mRNAs) involved in tumor cell proliferation, angiogenesis, survival and immune signaling. This inhibits tumor cell proliferation in MNK1/2-overexpressing tumor cells. MNK1/2 are overexpressed in a variety of tumor cell types and promote phosphorylation of eIF4E; eIF4E is overexpressed in many tumor cell types and contributes to tumor development, maintenance and resistance.