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Tucidinostat

National Cancer Institute

Source

National Cancer Institute. Tucidinostat. NCI Thesaurus. Code C97263.

An orally bioavailable benzamide-type inhibitor of histone deacetylase (HDAC) isoenzymes 1, 2, 3 and 10, with potential antineoplastic activity. Upon administration, tucidinostat binds to and inhibits HDACs, leading to an increase of acetylation levels of histone proteins. This agent also inhibits the expression of kinases in the PI3K/Akt and MAPK/Ras signaling pathways and may result in cell cycle arrest and the induction of tumor cell apoptosis. This may inhibit tumor cell proliferation in susceptible tumor cells. HDACs, a class of enzymes that deacetylate chromatin histone proteins, are upregulated in many tumor types and play key roles in gene expression. Compared to some other benzamide-type HDAC inhibitors, chidamide is more stable, more resistant to degradation and has a longer half-life.