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Delanzomib

National Cancer Institute

Source

National Cancer Institute. *Delanzomib*. NCI Thesaurus. Code C74075.

An orally bioavailable synthetic P2 threonine boronic acid inhibitor of the chymotrypsin-like activity of the proteasome, with potential antineoplastic activity. Delanzomib represses the proteasomal degradation of a variety of proteins, including inhibitory kappaBalpha (IkappaBalpha), resulting in the cytoplasmic sequestration of the transcription factor NF-kappaB; inhibition of NF-kappaB nuclear translocation and transcriptional up-regulation of a variety of cell growth-promoting factors; and apoptotic cell death in susceptible tumor cell populations. In vitro studies indicate that this agent exhibits a favorable cytotoxicity profile toward normal human epithelial cells, bone marrow progenitors, and bone marrow-derived stromal cells relative to the proteasome inhibitor bortezomib. The intracellular protein IkappaBalpha functions as a primary inhibitor of the proinflammatory transcription factor NF-kappaB.