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Alanosine

National Cancer Institute

Source

National Cancer Institute. *Alanosine*. NCI Thesaurus. Code C994.

An amino acid analogue and antibiotic derived from the bacterium *Streptomyces alanosinicus* with antimetabolite and potential antineoplastic activities. L-alanosine inhibits adenylosuccinate synthetase, which converts inosine monophosphate (IMP) into adenylosuccinate, an intermediate in purine metabolism. L-alanosine-induced disruption of de novo purine biosynthesis is potentiated by methylthioadenosine phosphorylase (MTAP) deficiency. The clinical use of this agent may be limited by its toxicity profile. MTAP is a key enzyme in the adenine and methionine salvage pathways.