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# Cycloleucine

National Cancer Institute

## Source

National Cancer Institute. *Cycloleucine*. NCI Thesaurus. Code C404.

A non-metabolizable synthetic amino acid, formed through the cyclization of the amino acid leucine, with immunosuppressive, antineoplastic, and cytostatic activities.

Cycloleucine competitively inhibits the enzyme methionine adenosyltransferase, resulting in the inhibition of S-adenosylmethionine (SAM) synthesis from methionine and ATP, and subsequent nucleic acid methylation and polyamine production; RNA, and perhaps to a lesser extent, DNA biosyntheses and cell cycle progression are finally disrupted. This agent is also a competitive inhibitor at the glycine modulatory site of the N-methyl-D-aspartate (NMDA) receptor.