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Diethylnorspermine

National Cancer Institute

Source

National Cancer Institute. *Diethylnorspermine*. NCI Thesaurus. Code C1168.

A synthetic bis-ethyl analogue of spermine with potential antineoplastic activity.

N(1),N(11)-bis(ethyl)norspermine (DENSPM), a N-terminally alkylated tetraamine and polyamine mimetics, disrupts polyamine pool homeostasis by modulating the activities of the biosynthetic enzymes, ornithine decarboxylase (ODC), and S-adenosylmethionine decarboxylase (AdoMetDC). This agent also reduces polyamine concentrations through the induction of the catabolic enzyme spermidine/spermine N1-acetyltransferase 1 (SSAT). Polyamines, an integral part of the DNA helix structure, play a critical role in cell division, differentiation and membrane function. Disruption of normal polyamine concentrations by DENSPM may lead to cell growth inhibition.