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S-Adenosylmethionine

National Cancer Institute

Source

National Cancer Institute. *S-Adenosylmethionine*. NCI Thesaurus. Code C63661.

A nutritional supplement that is synthesized from adenosine triphosphate (ATP) and the amino acid methionine by the endogenous essential enzyme methionine adenosyltransferase (MAT), with potential antineoplastic activity. Upon administration, S-adenosylmethionine acts as a methyl donor for various transmethylation reactions. In cancer cells, this agent induces the methylation of tumor promoting genes, reverses DNA hypomethylation, and leads to the suppression of oncogene transcription. This induces apoptosis in and inhibits proliferation of susceptible tumor cells.