

[Open Peer Review on Qeios](#)

# S-Adenosylhomocysteine

National Cancer Institute

## Source

National Cancer Institute. *S-Adenosylhomocysteine*. NCI Thesaurus. Code C103149.

An amino acid derivative and an intermediate in the synthesis of cysteine and adenosine. S-adenosylhomocysteine (SAH) is formed upon S-adenosylmethionine (SAM)-dependent methylation (homocysteine methionine cycle) of biological molecules, such as DNA, RNA, and proteins. It is then hydrolyzed by S-adenosylhomocysteine hydrolase to form adenosine and homocysteine. As SAH modulates methylation dependent reactions, SAH levels and the ratio of SAH:SAM may be used to assess methylation status of macromolecules.