

# dc-Adenosyl methionine + Spermidine => Spermine + 5'-methylthioadenosine

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## Introduction

Reactome is open-source, open access, manually curated and peer-reviewed pathway database. Pathway annotations are authored by expert biologists, in collaboration with Reactome editorial staff and cross-referenced to many bioinformatics databases. A system of evidence tracking ensures that all assertions are backed up by the primary literature. Reactome is used by clinicians, geneticists, genomics researchers, and molecular biologists to interpret the results of high-throughput experimental studies, by bioinformaticians seeking to develop novel algorithms for mining knowledge from genomic studies, and by systems biologists building predictive models of normal and disease variant pathways.

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## Literature references

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- Sidiropoulos, K., Viteri, G., Sevilla, C., Jupe, S., Webber, M., Orlic-Milacic, M. et al. (2017). Reactome enhanced pathway visualization. *Bioinformatics*, 33, 3461-3467. [↗](#)
- Fabregat, A., Jupe, S., Matthews, L., Sidiropoulos, K., Gillespie, M., Garapati, P. et al. (2018). The Reactome Pathway Knowledgebase. *Nucleic Acids Res*, 46, D649-D655. [↗](#)
- Fabregat, A., Korninger, F., Viteri, G., Sidiropoulos, K., Marin-Garcia, P., Ping, P. et al. (2018). Reactome graph database: Efficient access to complex pathway data. *PLoS computational biology*, 14, e1005968. [↗](#)

Reactome database release: 88

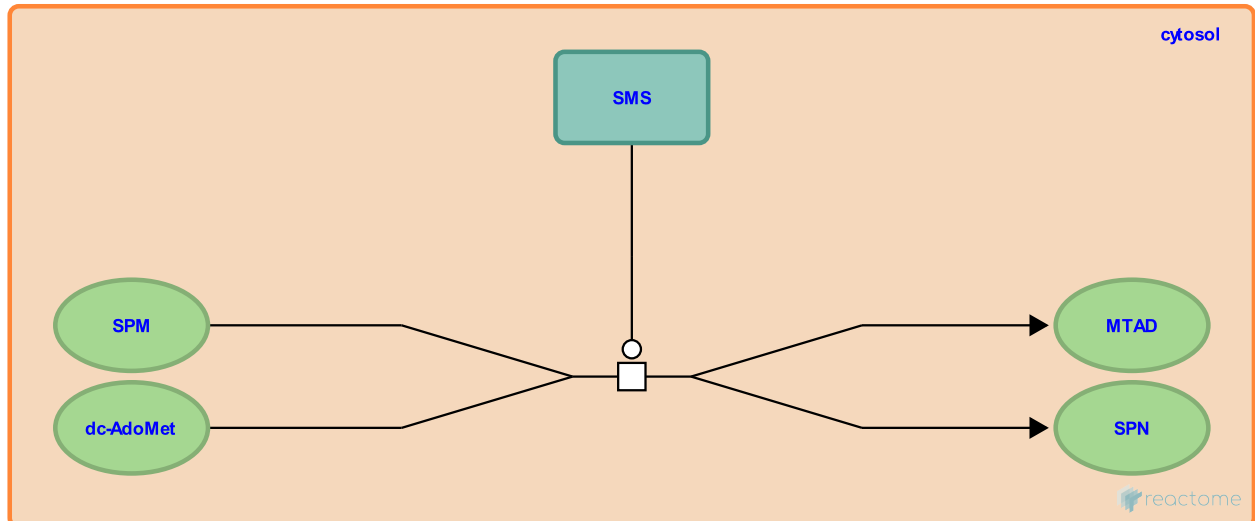
This document contains 1 reaction ([see Table of Contents](#))

## dc-Adenosyl methionine + Spermidine => Spermine + 5'-methylthioadenosine [↗](#)

**Stable identifier:** R-HSA-351210

**Type:** transition

**Compartments:** cytosol



The protein encoded by this gene belongs to the spermidine/spermine synthases family. This gene encodes an ubiquitous enzyme of polyamine metabolism. Defects in SMS are the cause of Snyder-Robinson syndrome (SRS).

### Literature references

Keinänen, T., Korhonen, VP., Halmekytö, M., Alhonen, L., Myöhänen, S., Eloranta, T. et al. (1995). Molecular cloning of a cDNA encoding human spermine synthase. *DNA Cell Biol*, 14, 841-7. [↗](#)

### Editions

2006-04-27	Edited	Gopinathrao, G.
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