

sarcosine/dimethylglycine N-methyltransferase

Cat. No. EXWM-1753

Lot. No. (See product label)

Introduction

Description Cells of the oxygen-evolving halotolerant cyanobacterium *Aphanocethece halophytica* synthesize betaine from glycine by a three-step methylation process. The first enzyme, EC 2.1.1.156, glycine/sarcosine N-methyltransferase, leads to the formation of either sarcosine or N,N-dimethylglycine, which is further methylated to yield betaine (N,N,N-trimethylglycine) by the action of this enzyme. Both of these enzymes can catalyse the formation of N,N-dimethylglycine from sarcosine. The reactions are strongly inhibited by S-adenosyl-L-homocysteine.

Synonyms ApDMT; sarcosine-dimethylglycine methyltransferase; SDMT; sarcosine dimethylglycine N-methyltransferase; S-adenosyl-L-methionine:N,N-dimethylglycine N-methyltransferase

Product Information

Form Liquid or lyophilized powder

EC Number EC 2.1.1.157

Reaction $2 \text{ S-adenosyl-L-methionine} + \text{sarcosine} = 2 \text{ S-adenosyl-L-homocysteine} + \text{betaine}$ (overall reaction); (1a) $\text{S-adenosyl-L-methionine} + \text{sarcosine} = \text{S-adenosyl-L-homocysteine} + \text{N,N-dimethylglycine}$; (1b) $\text{S-adenosyl-L-methionine} + \text{N,N-dimethylglycine} = \text{S-adenosyl-L-homocysteine} + \text{betaine}$

Notes This item requires custom production and lead time is between 5-9 weeks. We can custom produce according to your specifications.

Storage and Shipping Information

Storage Store it at +4 °C for short term. For long term storage, store it at -20 °C~-80 °C.