Creative Enzymes®

sarcosine/dimethylglycine N-methyltransferase

Cat. No. EXWM-1753

Lot. No. (See product label)

Introduction

Description	Cells of the oxygen-evolving halotolerant cyanobacterium Aphanocthece 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 S-adenosyl-L-methionine + sarcosine = 2 S-adenosyl-L-homocysteine + betaine (overall reaction); (1a) S-adenosyl-L-methionine + sarcosine = S-adenosyl-L-homocysteine + N,N-dimethylglycine; (1b) S-adenosyl-L-methionine + N,N-dimethylglycine = S-adenosyl-L-homocysteine + 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 ℃ for short term. For long term storage, store it at -20 ℃~-80 ℃.