Creative Enzymes®

glycine/sarcosine N-methyltransferase

Cat. No. EXWM-1752

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. This is the first enzyme and it 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 EC 2.1.1.157, sarcosine/dimethylglycine N-methyltransferase. Differs from EC 2.1.1.20, glycine N-methyltransferase, as it can further methylate the product of the first reaction. Acetate, dimethylglycine and S-adenosyl-L-homocysteine can inhibit the reaction.
Synonyms	ApGSMT; glycine-sarcosine methyltransferase; GSMT; GMT; glycine sarcosine N-methyltransferase; S-adenosyl-L-methionine:sarcosine N-methyltransferase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.1.1.156
CAS No.	294210-82-5
Reaction	2 S-adenosyl-L-methionine + glycine = 2 S-adenosyl-L-homocysteine + N,N-dimethylglycine (overall reaction); (1a) S-adenosyl-L-methionine + glycine = S-adenosyl-L-homocysteine + sarcosine; (1b) S-adenosyl-L-methionine + sarcosine = S-adenosyl-L-homocysteine + N,N-dimethylglycine
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 ℃.