Creative Enzymes®

multisite-specific tRNA:(cytosine-C5)-methyltransferase

Cat. No. EXWM-1803

Lot. No. (See product label)

Introduction

Description	The enzyme from Saccharomyces cerevisiae is responsible for complete 5-methylcytosine methylations of yeast tRNA. The incidence of modification depends on the cytosine position in tRNA. At positions 34 and 40, 5-methylcytosine is found only in two yeast tRNAs (tRNALeu(CUA) and tRNAPhe(GAA), respectively), whereas most other elongator yeast tRNAs bear either 5-methylcytosine48 or 5-methylcytosine49, but never both in the same tRNA molecule. The formation of 5-methylcytosine34 and 5-methylcytosine40 is a strictly intron-dependent process, whereas the formation of 5-methylcytosine48 and 5-methylcytosine49 is an intron-independent process.
Synonyms	multisite-specific tRNA:m5C-methyltransferase; TRM4 (gene name, gene corresponding to ORF YBL024w)

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.1.1.202
Reaction	(1) S-adenosyl-L-methionine + cytosine34 in tRNA precursor = S-adenosyl-L-homocysteine + 5-methylcytosine34 in tRNA precursor; (2) S-adenosyl-L-methionine + cytosine40 in tRNA precursor = S-adenosyl-L-homocysteine + 5-methylcytosine40 in tRNA precursor; (3) S-adenosyl-L-methionine + cytosine48 in tRNA = S-adenosyl-L-homocysteine + 5-methylcytosine48 in tRNA; (4) S-adenosyl-L-methionine + cytosine49 in tRNA = S-adenosyl-L-homocysteine + 5-methylcytosine49 in tRNA
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 ℃.