Creative Enzymes®

tRNA-2-methylthio-N6-dimethylallyladenosine synthase

Cat. No. EXWM-3429

Lot. No. (See product label)

Introduction

Description	This bacterial enzyme binds two [4Fe-4S] clusters as well as the transferred sulfur. The enzyme is a member of the superfamily of S-adenosyl-L-methionine-dependent radical (radical AdoMet) enzymes. The sulfur donor is believed to be one of the [4Fe-4S] clusters, which is sacrificed in the process, so that in vitro the reaction is a single turnover. The identity of the electron donor is not known.
Synonyms	MiaB; 2-methylthio-N-6-isopentenyl adenosine synthase; tRNA-i6A37 methylthiotransferase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 2.8.4.3
Reaction	N6-dimethylallyladenine37 in tRNA + sulfur-(sulfur carrier) + 2 S-adenosyl-L-methionine + reduced electron acceptor = 2-methylthio-N6-dimethylallyladenine37 in tRNA + S-adenosyl-L-homocysteine + (sulfur carrier) + L-methionine + 5'-deoxyadenosine + electron acceptor (overall reaction); (1a) N6-dimethylallyladenine37 in tRNA + sulfur-(sulfur carrier) + S-adenosyl-L-methionine + reduced electron acceptor = 2-thio-N6-dimethylallyladenine37 in tRNA + (sulfur carrier) + L-methionine + 5'-deoxyadenosine + electron acceptor; (1b) S-adenosyl-L-methionine + 2-thio-N6-dimethylallyladenine37 in tRNA = S-adenosyl-L-homocysteine + 2-methylthio-N6-dimethylallyladenine37 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 ℃.