

methylated-thiol-coenzyme M methyltransferase

Cat. No. EXWM-1855

Lot. No. (See product label)

Introduction

Description

The enzyme, which is involved in methanogenesis from methylated thiols, such as methane thiol, dimethyl sulfide, and 3-S-methylmercaptopropionate, catalyses two successive steps - the transfer of a methyl group from the substrate to the cobalt cofactor of a methylated-thiol-specific corrinoid protein (MtsB), and the subsequent transfer of the methyl group from the corrinoid protein to coenzyme M. With most other methanogenesis substrates this process is carried out by two different enzymes (for example, EC 2.1.1.90, methanol-corrinoid protein Co-methyltransferase, and EC 2.1.1.246, methylated methanol-specific corrinoid protein:coenzyme M methyltransferase). The cobalt is oxidized during methylation from the Co(I) state to the Co(III) state, and is reduced back to the Co(I) form during demethylation.

Synonyms

mtsA (gene name)

Product Information

Form

Liquid or lyophilized powder

EC Number

EC 2.1.1.251

Reaction

methanethiol + coenzyme M = methyl-CoM + hydrogen sulfide (overall reaction);
(1a) methanethiol + a [Co(I) methylated-thiol-specific corrinoid protein] = a [methyl-Co(III) methylated-thiol-specific corrinoid protein] + hydrogen sulfide; (1b) a [methyl-Co(III) methylated-thiol-specific corrinoid protein] + coenzyme M = methyl-CoM + a [Co(I) methylated-thiol-specific corrinoid protein]

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.