Creative Enzymes®

methanol dehydrogenase (nicotinoprotein)

Cat. No. EXWM-0465

Lot. No. (See product label)

Introduction

Description	Contains Zn2+ and Mg2+. Nicotinoprotein methanol dehydrogenases have a tightly bound NADP+/NADPH cofactor that does not dissociate during the catalytic process. Instead, the cofactor is regenerated by a second substrate or electron carrier. While the in vivo electron acceptor is not known, N,N-dimethyl-4-nitrosoaniline (NDMA), which is reduced to 4-(hydroxylamino)-N,N-dimethylaniline, can serve this function in vitro. The enzyme has been detected in several Gram-positive methylotrophic bacteria, including Amycolatopsis methanolica, Rhodococcus rhodochrous and Rhodococcus erythropolis. These enzymes are decameric, and possess a 5-fold symmetry. Some of the enzymes can also dismutate formaldehyde to methanol and formate.
Synonyms	NDMA-dependent methanol dehydrogenase; nicotinoprotein methanol dehydrogenase; methanol:N,N-dimethyl-4-nitrosoaniline oxidoreductase

Product Information

Form	Liquid or lyophilized powder
EC Number	EC 1.1.99.37
Reaction	methanol + acceptor = formaldehyde + reduced acceptor
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 ℃.