

## methanol dehydrogenase (nicotinoprotein)

Cat. No. EXWM-0465

Lot. No. (See product label)

### Introduction

#### Description

Contains Zn<sup>2+</sup> and Mg<sup>2+</sup>. Nicotinoprotein methanol dehydrogenases have a tightly bound NADP<sup>+</sup>/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 °C for short term. For long term storage, store it at -20 °C~-80 °C.