

methanol dehydrogenase (nicotinoprotein)

Cat. No. EXWM-0465

Lot. No. (See product label)

Introduction

Description Contains Zn^{2+} and Mg^{2+} . 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 °C for short term. For long term storage, store it at -20 °C~-80 °C.