AE0020_UG_EN_V2302

NADH peroxidase (EC 1.11.1.1), *Streptococcus faecalis ATCC 11700*

Catalogue number	Presentation
AE00201	500 U (1 mL)

Description

NADH peroxidase (EC 1.11.1.1), systematically designated by NADH:hydrogen-peroxide oxidoreductase, is an enzyme that catalyzes the conversion of NADH and hydrogen peroxide into NAD^+ and water. It is a flavoprotein, thus requiring the FAD as cofactor. The NZYtech NADH peroxidase is the *Streptococcus faecalis* enzyme expressed in *Escherichia coli*. The crystal structure of NADH peroxidase from Streptococcus faecalis has been solved (PDB accession number 1NPX). The enzyme is a symmetrical tetramer with a fold similar to those of disulfide oxidoreductases. Swirl the enzyme mix immediately prior to use.

Purity

NADH peroxidase has been determined to be >95% pure, according to SDS polyacrylamide gel electrophoresis (PAGE) followed by Coomassie blue staining (Figure 1).

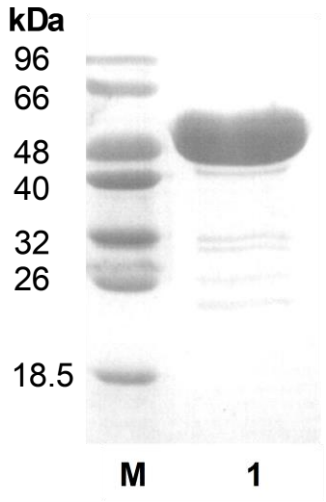

Figure 1. SDS-PAGE analysis of *Streptococcus faecalis* NADH peroxidase expressed in *E. coli*. Electrophoresis was performed using a 10% polyacrylamide gel. Lane M, molecular weight marker; Lane 1, purified NADH peroxidase (51 kDa).

Storage temperature

NADH peroxidase should be stored at 2°C to 8°C.

Temperature and pH optimum

The optimum pH and temperature are 5.5 and 25 °C, respectively.

Activity

500 U/ml

Unit Definition

One unit is defined as the amount of enzyme required to produce 1 µmol of NAD^+ from NADH in a reaction mixture containing 189 mM tris acetate, 0.009% (w/w) hydrogen peroxide, 0.36 mM NADH, at pH 5.5 and 25°C.

References

Ross R.P. and Claiborne A. (1991) Journal of Molecular Biology 221, 857-871.

Stehle et al. (1991) Journal of Molecular Biology 221, 1325–1344.