

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

Catalogue number:

AE00201, 500 U

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).

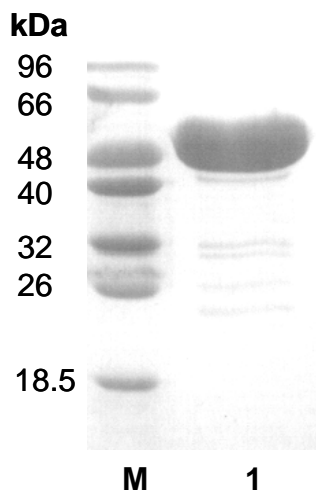


Figure 1. SDS-PAGE analysis of *Streptococcus faecalis* NADH peroxidase expressed in *E. coli*. Electrophoresis was performed using a 10% polyacrylamide gel. Lane M, molecular weight marker; Lane 1, purified NADH peroxidase (51 kDa).

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.

Specific 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.

Certificate of Analysis

Test	Criteria	Result
Protein purity	Purity in line with the stated value	Meets specification
Activity	Activity in line with the stated value	Meets specification

Approved by:



Patrícia Ponte
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