

Diaphorase, Enzyme Activity

Catalog	Unit
TBP0015-1KU	1000 U
TBP0015-5KU	5000 U

Preparation and Specification

Appearance: Yellowish amorphous powder, lyophilized

Activity: Grade III 500 U/mg-solid or more

Contaminants: Myokinase $\leq 5.0 \times 10^{-1}\%$, NADH oxidase $\leq 1.0 \times 10^{-1}\%$

Properties

Stability: Stable at -20°C

Molecular weight: approx. 48,000

Michaelis constant: $2.2 \times 10^{-4}\text{M}$ (NADH), $2.9 \times 10^{-2}\text{M}$ (NADPH)

Inhibitors: Fe^{3+} , Mn^{2+} , Cu^{2+} , Pb^{2+}

Isoelectric point: 5.0

Optimum pH: 8.0

Optimum temperature: 60°C

pH Stability: 5.0–10.0 (25°C , 20hr)

Thermal stability: below 70°C (pH7.5, 15min)

Substrate specificity: Either NADH or NADPH can be used as a reductant.

NAD(P)H:(acceptor)oxidoreductase(EC 1.6.99.-)

NAD(P)H + H⁺ + Acceptor(ox) \longrightarrow NAD(P)⁺ + Acceptor(red)

Applications

This enzyme is useful for colorimetric determination of NAD(P)H and many dehydrogenases when coupled with various dyes which act as hydrogen acceptors from NAD(P)H.

For research use only