

Peroxidase, Enzyme Activity

Catalog	Unit
TBP0037-1KU	1000 U
TBP0037-5KU	5000 U

Preparation and Specification

Appearance: Reddish-brown amorphous powder, lyophilized

Activity: Grade I 250 Purpurogallin U/mg-solid or more (-131) (RZ \geq 3.0, salt free)

Grade III 110 Purpurogallin U/mg-solid or more (-301) (RZ \geq 2.0, containing approx. 30% of stabilizers)

Grade III 180 Purpurogallin U/mg-solid or more (-302) (RZ \geq 2.0, salt free)

Contaminant: Phosphatase $\leq 1.0 \times 10^{-3}\%$ (Grade III)

Properties

Stability: Stable at -20°C for at least Two years

Molecular weight: approx. 40,000

Structure: Glycoprotein with one mole of protohaemin IX

Inhibitors: Cyanide, sulfide, fluoride, azide

Optimum pH: 6.0-7.0

Optimum temperature: 45°C

pH Stability: pH 5.0-10.0 (25°C , 20hr)

Thermal stability: below 50°C (pH 6.0, 10min)

Donor: hydrogen-peroxidase oxidoreductase (EC 1.11.1.7)

Donor + H₂O₂ \longrightarrow Oxidized donor + 2H₂O

Applications

This enzyme is useful for enzymatic determination of H₂O₂ in clinical analysis. Especially, the highly purified preparation (Grade I) is useful as a protein tracer in histo- and cyto-chemistry and as a valuable experimental tool in hodological neurography. Also, the enzyme preparation has been used as an enzyme label in enzyme immunoassay. Grade III is suitable for dry chemistry. On the other hand, the enzymes contribute for the reduction of phehol in waste water.

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