

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(-302) is suitable for dry chemistry. On the other hand, the enzymes contribute for the reduction of phenol in waste water.

For research use only