

Protocatechuate 3,4-dioxygenase, Enzyme Activity

Catalog	Unit
TBP0036-25U	25 U
TBP0036-50U	50 U

Preparation and Specification

Appearance: Light brown amorphous powder, lyophilized

Activity: Grade III 3.0U/mg-solid or more

Protocatechuate: oxygen 3,4-oxidoreductase (decyclizing) (EC 1.13.11.3)

Contaminant: NADPH oxidase $\leq 1.0 \times 10^{-1}\%$

Protocatechuate + O₂ → β-Carboxymuconate

Stabilizers: Sugars

Properties

Stability: Stable at -20°C

Molecular weight: approx. 600,000 (by gel filtration)

Michaelis constant: 1.85×10^{-5} M (Protocatechuate)

Structure: Protein with nonheme iron

Inhibitors: Ag⁺, Hg⁺⁺

Optimum pH: 9.0

Optimum temperature: 60-65°C

pH Stability: pH 6.0-9.5 (25°C, 72hr)

Thermal stability: below 55°C (pH 7.5, 1hr)

Applications

This enzyme is useful for enzymatic determination of choline esterase when coupled with p-hydroxybenzoate hydroxylase (HBH-311).

For research use only