

## Ascorbate oxidase, Enzyme Activity

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Catalog	Unit
TBP0006-1KU	1000 U
TBP0006-5KU	5000 U

### Preparation and Specification

Appearance: Light blue amorphous powder, lyophilized

Activity: Grade III 200U/mg-solid or more (containing approx. 70% of stabilizers)

Contaminants: Catalase  $\leq 1.0 \times 10^{-1}\%$ ; Phosphatase  $\leq 2.0 \times 10^{-2}\%$

Stabilizers: BSA, borax, basic amino acids.

**L-Ascorbate: oxygen oxidoreductase (EC 1.10.3.3)**

**L-Ascorbic acid +  $\frac{1}{2}\text{O}_2 \rightarrow$  Dehydroascorbic acid + H<sub>2</sub>O**

### Properties

Stability: Stable at  $-20^\circ\text{C}$  for at least one year

Molecular weight: 132,000, 140,000

Isoelectric point: between 6.0 and 7.8, 8.2

Michaelis constant:  $2.5 \times 10^{-4}\text{M}$  (Ascorbate)

Structure: 8 copper atoms per enzyme molecule

Inhibitors: cyanide, Na<sub>2</sub>S, diethyldithiocarbamate (Na)

Optimum pH: 5.6

Optimum temperature: approx.  $30^\circ\text{C}$

pH Stability: pH 7.0–10.0 ( $25^\circ\text{C}$ , 17hr)

Thermal stability: below  $40^\circ\text{C}$  (pH 8.0, 30min)

Substrate specificity: This enzyme oxidizes ascorbic acid and several ascorbic derivatives.

### Applications

This enzyme is useful for enzymatic determination of ascorbic acid and for eliminating the interference of ascorbic acid in clinical analysis.

For research use only