

Ascorbate Oxidase

CATALOG NO: P1569-100 100 Units
P1569-1000 1 KU

ALTERNATE NAMES: L-Ascorbate, oxygen oxidoreductase, Ascorbase, EC 1.10.3.3, CAS# 9029-44-1

MOL. WT. The enzyme exists as a dimer with a molecular weight of approximately 140 kDa. The monomer molecular weight is approximately 65 to 70 kDa. It is a multicopper oxidase containing approximately 8 copper atoms per molecule.

SOURCE: Cucurbita sp.

FORM: Lyophilized

FORMULATION: Lyophilized powder containing buffers and sucrose as stabilizer.

RECONSTITUTION: The enzyme is reconstituted in 4 mM sodium phosphate buffer, pH 5.6, with 0.05% (w/v) BSA.

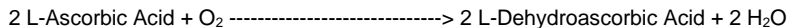
SPECIFIC ACTIVITY: 1,000 to 3,000 units per mg protein

UNIT DEFINITION: One unit will oxidize 1.0 μ mole of L-ascorbate to dehydroascorbate per minute at pH 5.6 at 25 °C.

STORAGE CONDITIONS: The product is very hygroscopic. Store the lyophilized powder desiccated at 2-8 °C. Prepare solutions fresh. Freeze-thaws of solutions may result in loss of activity.

DESCRIPTION: This enzyme catalyzes the following reaction:

Ascorbate Oxidase



Ascorbate oxidase is a homodimeric enzyme, which comprises 552 amino acid residues per subunit (zucchini). It corresponds to a molecular mass of 70 kDa per subunit. This enzyme is mainly found in plants, fungi and eubacteria. This enzyme is involved in a redox system involving ascorbic acid. The enzyme is highly specific for L-ascorbic acid and a few analogs. The pH optimum for enzymatic activity is in the range of pH 5.5 to 7.0. The activity at pH 4.5 and 8.3 is approximately 50% maximal activity.

AMINO ACID SEQUENCE: 552 amino acid

RELATED PRODUCTS:

- Ascorbic Acid Colorimetric Assay Kit II (FRASC) (K671)
- L-Ascorbic acid (2269)
- Ascorbic Acid Colorimetric/Fluorometric Assay Kit (K661)

FOR RESEARCH USE ONLY! Not to be used on humans.

