CREATIVE BIOMART®
Assay Kit

Catalase Assay Kit (without Hydrogen Peroxide)

Product Information

Cat.No. Kit-0179

Product Overview

Catalase Assay Kit utilizes the peroxidatic function of CAT for determination of enzyme activity in plasma, serum, erythrocyte lysates, tissue homogenates, and cell lysates. The method is based on the reaction of the enzyme with methanol in the presence of an optimal concentration of H2O2. The formaldehyde produced is measured colorimetrically with Purpald, a chromogen that specifically forms a bicyclic heterocycle with aldehydes, which upon oxidation changes from colorless to a purple color

Description

Catalase (EC 1.11.1.6; 2H2O2 oxidoreductase) is an ubiquitous antioxidant enzyme that is present in most aerobic cells. Catalase (CAT) is involved in the detoxification of hydrogen peroxide (H2O2), a reactive oxygen species (ROS), which is a toxic product of both normal aerobic metabolism and pathogenic ROS production. This enzyme catalyzes the conversion of two molecules of H2O2 to molecular oxygen and two molecules of water (catalytic activity). CAT also demonstrates peroxidatic activity, in which low molecular weightalcohols can serve as electron donors. While aliphatic alcohols serve as specific substrates for CAT, other enzymes with peroxidatic activity do not utilize these substrates.In humans, the highest levels of CAT are found in liver, kidney, and erythrocytes, where it is believed to account for the majority of H2O2 decomposition.

Usage

Please read these instructions carefully before beginning this assay. For research use only. Not for human or diagnostic use.It is recommended to take appropriate precautions when using the kit reagents (i.e., lab coat, gloves, eye goggles, etc.) as some of them can be harmful.Catalase Formaldehyde Standard is carcinogenic. It is toxic if inhaled, ingested, or if in contact with skin. In case of contact with skin or eyes, rinse immediately with plenty of water for 15 minutes. Keep away from combustible materials.*Catalase Potassium Hydroxide is corrosive and is harmful if swallowed. Contact with skin may cause burns. In case of contact with skin or eyes, rinse immediately with plenty of water for 15 minutes. Keep away from combustible materials.*Catalase Purpald

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(Chromogen) is an irritant. In case of contact with skin or eyes, rinse immediately with plenty of water for 15 minutes.*Catalase Potassium Periodate is an oxidizer and an irritant. In case of contact with skin or eyes, rinse immediately with plenty of water for 15 minutes.*Hydrochloric acid is corrosive and is harmful if swallowed. Contact with skin may cause burns. In case of contact with skin or eyes, rinse immediately with plenty of water for 15 minutes.**Before use the user must review the complete Material Safety Data Sheet.

Storage

Stability: 1 year;Storage: 4°C;This kit will perform as specified if stored at 4°C and used before the expiration date indicated on the outside of the box.

Kit Components

Catalase Assay Buffer (10X): 1 vial/5 ml; 2 vials/5 ml;Catalase Sample Buffer (10X): 1 vial/10 ml; 2 vials/10 ml;Catalase Formaldehyde Standard: 1 vial/100 μL; 1 vial/100 μL;Catalase (Control): 1 vial/lyophilized; 2 vials/lyophilizedCatalase Potassium Hydroxide: 1 vial/4 ml; 5 vials/4 ml;Catalase Purpald (Chromogen): 1 vial/4 ml; 5 vials/4 ml;Catalase Potassium Periodate: 1 vial/1.5 ml; 5 vials/1.5 ml;High-Binding 96-Well Solid Plate: 1 plate; 5 plates;96-Well Cover Sheet: 1 cover; 5 covers

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