CREATIVE BIOMART®
Assay Kit

Superoxide Dismutase Detection Kit

Product Information

Cat.No.

Kit-0793

Product Overview

Superoxide dismutase (SOD) are metalloenzymes that catalyze the dismutation of superoxide radical into hydrogen peroxide (H2O2) + molecular oxygen (O2) and consequently provide an important defense mechanism against superoxide radical toxicity. SOD has shown to protect murine peritoneal macrophages from apoptosis induced by adriamycine. Additionally, the over expression of SOD in fibrosarcome cells, has exhibited protection against apoptosis and promotes cell differentiation. This Superoxide Dismutase Detection Kit utilizes a water-soluble tetrazolium salt, WST-1 (2-(4-Iodophenyl)-3-(4-nitrophenyl)-5-(2,4-disulfophenyl)-2H-tetrazolium, monosodium salt) that produces a highly water-soluble formazan dye upon reduction with a superoxide anion.

Description

Superoxide dismutase (SOD) are metalloenzymes that catalyze the dismutation of superoxide radical into hydrogen peroxide (H2O2) + molecular oxygen (O2) and consequently provide an important defense mechanism against superoxide radical toxicity. Oxidative stress dependent upon superoxide radical can account for a number of acute and chronic disease states, which include inflammation and ischemia-reperfusion. SOD protects murine peritoneal macrophages from apoptosis induces by adriamycine. Furthermore over expression of SOD in fibrosarcome cells protect against apoptosis and promote cell differentiation.

Applications

Micro Plate Reader (Absorbance)

Usage

1. For Research use only. Not for use in diagnostic procedures.2. Practice safe laboratory procedures by wearing protective clothing and eyewear.3. Reducing agents, such as ascorbic acids and reduced forms of glutathiones, interfere with the SOD assay. Please note that since the increase in the O.D. values can be subtracted as the O.D. of blank 2, these materials do not

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interfere with the actual SOD assay.The following are the concentrations of materials that cause 10% increase in the O.D. value:Ascrobic acid: 0.1mM;Glutathione, reduced form: 5mM;BSA showed no increase in OD readings: 5%.

Storage

1. Long Term Storage: Store contents as labeled.2. Upon Arrival: 2-8o C.3. The kit should be stored at 4-8 oC and away from light. Stable for 12 months.

Kit Components

Reagent-Storage Temperature1. 20X WST-1 Solution: 1 ml, 2-8°C;2. Xanthine Oxidase Solution (XO): 20uL, 2-8°C;3. Assay Buffer: 20 mL, 2-8°C;4. Xanthine Oxidase Dilution Buffer: 10mL. (XO Dilution Buffer), 2-8°C;5. SOD Enzyme: 30uL. See vial for acivity, 2-8°C;6. 96 Well ELISA Plate: 1 plate, 2-8°C;7. Adhesive Plate Cover: Qty. 2, 2-8°C

Features & Benefits

1. 100% Inhibition by Super Oxide Dismutase (SOD).2. Can detect low concentrations of SOD.3. Highly water-soluble formazan dye.4. Applications: Colorimetric detection.

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