Superoxide Dismutase Activity Assay Kit (Colorimetric) ab65354

Overview

Product name: Superoxide Dismutase Activity Assay Kit (Colorimetric)
Sample type: Urine, Serum, Plasma, Other biological fluids, Tissue Extracts, Cell Lysate, Cell culture media
Assay type: Enzyme activity
Assay time: 0h 30m
Species reactivity: Reacts with: Mouse, Rat, Sheep, Human, Pig
Predicted to work with: Mammals

Product overview
Superoxide Dismutase Activity Assay Kit (Colorimetric) (ab65354) is a sensitive kit using WST-1 that produces a water-soluble formazan dye upon reduction with superoxide anion. The rate of the reduction with a superoxide anion is linearly related to the xanthine oxidase (XO) activity, and is inhibited by SOD. Therefore, the inhibition activity of SOD can be determined by a colorimetric method.

Visit our FAQs page for tips and troubleshooting.

Notes
Superoxide dismutase (SOD) is one of the most important antioxidative enzymes. It catalyzes the dismutation of the superoxide anion into hydrogen peroxide and molecular oxygen.

Properties

Storage instructions: Store at +4°C. Please refer to protocols.

Components | Identifier | 100 tests |
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SOD Assay Buffer | WM | 1 x 20ml |
SOD Dilution Buffer | NM | 1 x 10ml |
SOD Enzyme Solution | Green | 1 x 20µl |
WST Solution | Red | 1 x 1ml |

Relevance
Superoxide dismutase (SOD) is an antioxidant enzyme involved in the defense system against reactive oxygen species (ROS). SOD catalyzes the dismutation reaction of superoxide radical anion (O$_2^-$) to hydrogen peroxide, which is then catalyzed to innocuous O$_2$ and H$_2$O by
glutathione peroxidase and catalase. Several classes of SOD have been identified. These include intracellular copper, zinc SOD (Cu, Zn SOD/SOD1), mitochondrial manganese SOD (Mn SOD/SOD2) and extracellular Cu, Zn SOD (EC SOD/SOD3).

**Cellular localization**

Cytoplasmic

**Images**

Park J et al investigates the recovery in erectile function after administration of chronic statin alone in DM (streptozotocin (STZ)-induced diabetes mellitus) rats. SOD activity was determined using Superoxide Dismutase activity assay kit (ab65354).

* Indicates statistical significance in comparison with DM group (P < 0.05).

# Indicates statistical significance in comparison with the statin group (P<0.05).

Superoxide dismutase measured in biofluids at various dilutions
Superoxidase dismutase (ab90040) measured showing inhibition rate (%) per concentration (microgram per mL)

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