Product datasheet

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: Mammal

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.

Tested applications
Suitable for: Functional Studies

Properties

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

Components

<table>
<thead>
<tr>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOD Assay Buffer</td>
<td>WM</td>
</tr>
<tr>
<td>SOD Dilution Buffer</td>
<td>NM</td>
</tr>
<tr>
<td>SOD Enzyme Solution</td>
<td>Green</td>
</tr>
<tr>
<td>WST Solution</td>
<td>Red</td>
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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 $H_2O$ 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

**Applications**

Our Abpromise guarantee covers the use of ab65354 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
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</thead>
<tbody>
<tr>
<td>Functional Studies</td>
<td></td>
<td>Use at an assay dependent dilution.</td>
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</table>

**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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