**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: Other species, 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.

<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>SOD Assay Buffer</td>
<td>WM</td>
<td>1 x 20ml</td>
</tr>
<tr>
<td>SOD Dilution Buffer</td>
<td>NM</td>
<td>1 x 10ml</td>
</tr>
<tr>
<td>SOD Enzyme Solution</td>
<td>Green</td>
<td>1 x 20µl</td>
</tr>
<tr>
<td>WST Solution</td>
<td>Red</td>
<td>1 x 1ml</td>
</tr>
</tbody>
</table>

**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 (O₂⁻) to hydrogen peroxide, which is then catalyzed to innocuous O₂ and H₂O 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

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**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).

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Superoxide dismutase measured in biofluids at various dilutions

Superoxidase dismutase (ab90040) measured showing inhibition rate (%) per concentration (microgram per mL)
Principle of Superoxide Dismutase Assay.

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