### Overview

<table>
<thead>
<tr>
<th>Product name</th>
<th>Xanthine Oxidase Activity Assay Kit ab102522</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric/Fluorometric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Cell culture supernatant, Milk, Urine, Serum, Plasma, Other biological fluids, Tissue Extracts</td>
</tr>
<tr>
<td>Assay type</td>
<td>Enzyme activity</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>&gt; 10 mU/ml</td>
</tr>
<tr>
<td>Range</td>
<td>10 mU/ml - 1000 mU/ml</td>
</tr>
<tr>
<td>Assay time</td>
<td>0h 40m</td>
</tr>
<tr>
<td>Product overview</td>
<td>Xanthine Oxidase Activity Assay Kit ab102522 is an easy and sensitive assay to determine xanthine oxidase activity in variety of samples.</td>
</tr>
</tbody>
</table>

In the xanthine oxidase assay protocol, xanthine oxidase oxidizes xanthine to hydrogen peroxide (H₂O₂) which reacts stoichiometrically with a probe to generate color (at OD = 570 nm) and fluorescence (at Ex/Em = 535/587 nm). Since the color or fluorescence intensity is proportional to XO content, the XO activity can be accurately measured.

The kit detects 1-100 mU xanthine oxidase in 100 µl reaction volume.

Xanthine oxidase assay protocol summary:
- add samples and standards to wells
- add reaction mix
- analyze with microplate reader immediately and after 10-20 min

### Notes

Xanthine oxidase (XO, EC 1.17.3.2) is present in appreciable amounts in the liver and jejunum in healthy individuals. However, in various liver disorders, XO is released into circulation. Therefore, determination of serum XO level serves as a sensitive indicator of acute liver damage such as jaundice.

### Platform

Microplate reader

### Properties

| Storage instructions | Store at -20°C. Please refer to protocols. |
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**Cellular localization**
Cytoplasm. Peroxisome. Secreted.

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<table>
<thead>
<tr>
<th>Components</th>
<th>Identifier</th>
<th>100 tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>H₂O₂ Standard (0.88 M)</td>
<td>Yellow</td>
<td>1 x 0.1ml</td>
</tr>
<tr>
<td>OxiRed™ Probe (in DMSO)</td>
<td>Red</td>
<td>1 x 200µl</td>
</tr>
<tr>
<td>XO Assay Buffer</td>
<td>WM</td>
<td>1 x 25ml</td>
</tr>
<tr>
<td>XO Enzyme Mix (Lyophilized)</td>
<td>Green</td>
<td>1 vial</td>
</tr>
<tr>
<td>XO Positive Control</td>
<td>Blue</td>
<td>1 x 8µl</td>
</tr>
<tr>
<td>XO Substrate Mix (Lyophilized)</td>
<td>Purple</td>
<td>1 vial</td>
</tr>
</tbody>
</table>

**Relevance**
Xanthine oxidase (XO, EC 1.17.3.2) is present in appreciable amounts in the liver and jejunum in healthy individuals. However, in various liver disorders, XO is released into circulation. Therefore, determination of serum XO level serves as a sensitive indicator of acute liver damage such as jaundice.

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**Functional Studies - Xanthine Oxidase Assay Kit**
(Prod: ab102522)
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