Catalase Activity Assay Kit (Colorimetric/Fluorometric) (ab83464) is a highly sensitive, simple and direct assay for measuring catalase activity in a variety of biological samples such as cell and tissue lysates or biological fluids.

In the catalase activity assay protocol, the catalase present in the sample reacts with hydrogen peroxide (H₂O₂) to produce water and oxygen. The unconverted H₂O₂ reacts with probe to produce a product that can be measured colorimetrically at OD 570 nm or fluorometrically at Ex/Em = 535/587 nm. Therefore, the catalase activity present in the sample is reversely proportional to the signal obtained. The kit can detect as little as 1 µU of catalase activity.

Catalase activity assay protocol summary:
- add samples and standards to wells
- add stop solution into sample control wells and incubate at 25°C for 5 min
- add H₂O₂ solution into wells and incubate for 30 min at 25°C
- add stop solution
- add developer mix and incubate for 10 min at 25°C
- analyze with microplate reader

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>Catalase Assay Buffer</td>
<td>NM</td>
<td>1 x 25ml</td>
</tr>
</tbody>
</table>
**Function**

Occurs in almost all aerobically respiring organisms and serves to protect cells from the toxic effects of hydrogen peroxide. Promotes growth of cells including T-cells, B-cells, myeloid leukemia cells, melanoma cells, mastocytoma cells and normal and transformed fibroblast cells.

**Involvement in disease**

Defects in CAT are the cause of acatalasia (ACATLAS) [MIM:115500]; also known as acatalasemia. This disease is characterized by absence of catalase activity in red cells and is often associated with ulcerating oral lesions.

**Sequence similarities**

Belongs to the catalase family.

**Post-translational modifications**

The N-terminus is blocked.

**Cellular localization**

Peroxisome.

---

**Components**

<table>
<thead>
<tr>
<th><strong>Catalase Positive Control</strong></th>
<th><strong>Identifier</strong></th>
<th><strong>100 tests</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td></td>
<td>1 x 2µl</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>HRP (Lyophilised)</strong></th>
<th><strong>Identifier</strong></th>
<th><strong>1 vial</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydrogen peroxide</strong></td>
<td><strong>Identifier</strong></td>
<td><strong>1 x 25µl</strong></td>
</tr>
<tr>
<td><strong>OxiRed Probe</strong></td>
<td><strong>Identifier</strong></td>
<td><strong>1 x 200µl</strong></td>
</tr>
<tr>
<td><strong>Stop Solution</strong></td>
<td><strong>Identifier</strong></td>
<td><strong>1 x 1ml</strong></td>
</tr>
</tbody>
</table>

**Images**

Sample tests using ab83464.

![Sample tests using ab83464.](image1)

**H₂O₂ standard curve using ab83464.**

![H₂O₂ standard curve using ab83464.](image2)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"
Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit https://www.abcam.com/abpromise or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors