# Catalase Activity Assay Kit (Colorimetric/Fluorometric) ab83464

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.

### Assay Protocol

In the catalase activity assay protocol, the catalase present in the sample reacts with hydrogen peroxide ($\text{H}_2\text{O}_2$) to produce water and oxygen. The unconverted $\text{H}_2\text{O}_2$ 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 25ºC for 5 min
- add H2O2 solution into wells and incubate for 30 min at 25ºC
- add stop solution
- add developer mix and incubate for 10 min at 25ºC
- analyze with microplate reader

### Notes

Abcam has not and does not intend to apply for the REACH Authorisation of customers’ uses of products that contain European Authorisation list (Annex XIV) substances.

It is the responsibility of our customers to check the necessity of application of REACH Authorisation, and any other relevant authorisations, for their intended uses.

### Platform

- Microplate reader

---

**Overview**

<table>
<thead>
<tr>
<th>Product name</th>
<th>Catalase Activity Assay Kit (Colorimetric/Fluorometric)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection method</td>
<td>Colorimetric/Fluorometric</td>
</tr>
<tr>
<td>Sample type</td>
<td>Urine, Serum, Plasma, Cell Lysate, Tissue Lysate</td>
</tr>
<tr>
<td>Assay type</td>
<td>Enzyme activity (quantitative)</td>
</tr>
<tr>
<td>Assay time</td>
<td>0h 40m</td>
</tr>
<tr>
<td>Product overview</td>
<td>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.</td>
</tr>
</tbody>
</table>
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>
<tr>
<td>Catalase Positive Control</td>
<td>Blue</td>
<td>1 x 2µl</td>
</tr>
<tr>
<td>HRP (Lyophilised)</td>
<td>Green</td>
<td>1 vial</td>
</tr>
<tr>
<td>Hydrogen peroxide</td>
<td>Yellow</td>
<td>1 x 25µl</td>
</tr>
<tr>
<td>OxiRed Probe</td>
<td>Red</td>
<td>1 x 200µl</td>
</tr>
<tr>
<td>Stop Solution</td>
<td>White</td>
<td>1 x 1ml</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.

Images
Sample tests using ab83464.
Functional Studies - Catalase Assay Kit (ab83464)

H₂O₂ standard curve using ab83464.

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