## Overview

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>Anti-Thioredoxin 2 antibody [EPR15225]</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Description</strong></td>
<td>Rabbit monoclonal [EPR15225] to Thioredoxin 2</td>
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<tr>
<td><strong>Host species</strong></td>
<td>Rabbit</td>
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<tr>
<td><strong>Tested applications</strong></td>
<td>Suitable for: Flow Cyt, ICC/IF, WB, IHC-P</td>
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<tr>
<td><strong>Species reactivity</strong></td>
<td>Reacts with: Mouse, Rat, Human</td>
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<tr>
<td><strong>Immunogen</strong></td>
<td>Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) within Human Thioredoxin 2 aa 100 to the C-terminus. The exact sequence is proprietary. Database link: <a href="#">Q99757</a></td>
</tr>
<tr>
<td><strong>Positive control</strong></td>
<td>Raji and HeLa cell lysate. Human liver and mouse kidney tissue. HeLa and K562 cells.</td>
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</tbody>
</table>

**General notes**

Our RabMab® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to [RabMab® patents](#).

This product is a recombinant rabbit monoclonal antibody.

## Properties

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<tr>
<th><strong>Form</strong></th>
<th>Liquid</th>
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<tbody>
<tr>
<td><strong>Storage instructions</strong></td>
<td>Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.</td>
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</tbody>
</table>
| **Storage buffer** | Preservative: 0.01% Sodium azide  
Constituents: 59% PBS, 40% Glycerol, 0.05% BSA |
| **Purity**  | Protein A purified |
| **Clonality** | Monoclonal |
| **Clone number** | EPR15225 |
| **Isotype** | IgG |

## Applications
Thioredoxins (Trx) are small, multi-functional proteins with oxidoreductase activity and are ubiquitous in essentially all living cells. Trx contains a redox-active disulfide/dithiol group within the conserved Cys-Gly-Pro-Cys active site. The two cysteine residues in the conserved active centers can be oxidized to form intramolecular disulfide bonds. Reduction of the active site disulfide in oxidized Trx is catalyzed by Trx reductase with NADPH as the electron donor. The reduced Trx is a hydrogen donor for ribonucleotide reductase, the essential enzyme for DNA synthesis, and a potent general protein disulfide reductase with numerous functions in growth and redox regulations. Specific protein disulfide targets for reduction by Trx include protein disulfide isomerase(PDI) and a number of transcription factors such as p53, NF-kB and AP-1. Trx is also capable of removing H2O2, particularly when it is coupled with either methionine sulfoxide reductase or several isoforms of peroxiredoxins.

Mitochondrial
Western blot - Anti-Thioredoxin 2 antibody [EPR15225] (ab185544)

All lanes: Anti-Thioredoxin 2 antibody [EPR15225] (ab185544) at 1/10000 dilution

Lane 1: Raji cell lysate
Lane 2: K562 cell lysate
Lane 3: HeLa cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes: Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/1000 dilution

Predicted band size: 18 kDa
Observed band size: 12 kDa

why is the actual band size different from the predicted?

Immunohistochemical analysis of paraffin-embedded Human liver tissue labeling Thioredoxin 2 with ab185544 at 1/500 dilution.
Counter stain Hematoxylin.
Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Thioredoxin 2 with ab185544 at 1/500 dilution. Counter stain Hematoxylin.

Immunofluorescent analysis of 4% paraformaldehyde fixed HeLa cells labeling Thioredoxin 2 with ab185544 at 1/250 dilution. Secondary antibody Goat anti rabbit IgG (Alexa Fluor®555) at a 1/200 dilution. Counterstained with Dapi blue.

Flow cytometry analysis of 2% paraformaldehyde fixed K562 cells labeling Thioredoxin 2 with ab185544 at 1/150 dilution (pink) or a rabbit IgG isotype control (green), followed by secondary Goat anti rabbit IgG (FITC) at 1/150 dilution.

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