**Product datasheet**

**Anti-Cytochrome C antibody [EPR1327] ab133504**

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**Overview**

**Product name**  
Anti-Cytochrome C antibody [EPR1327]

**Description**  
Rabbit monoclonal [EPR1327] to Cytochrome C

**Host species**  
Rabbit

**Tested applications**  
Suitable for: WB, IHC-P, ICC/IF, IP

**Species reactivity**  
Reacts with: Mouse, Rat, Human

**Immunogen**  
Synthetic peptide within Human Cytochrome C aa 1-100. The exact sequence is proprietary.  
Database link: P99999

**Positive control**  
ICC/IF: SH-SY5Y and HeLa cells.  
IHC-P: Human cervical carcinoma tissue. Mouse liver tissue. Human and rat kidney tissue.  
IP: Molt-4 cells.

**General notes**  
This product is a recombinant monoclonal antibody, which offers several advantages including:  
- High batch-to-batch consistency and reproducibility  
- Improved sensitivity and specificity  
- Long-term security of supply  
- Animal-free production  

For more information see here.

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

We are constantly working hard to ensure we provide our customers with best in class antibodies. As a result of this work we are pleased to now offer this antibody in purified format. We are in the process of updating our datasheets. The purified format is designated 'PUR' on our product labels. If you have any questions regarding this update, please contact our Scientific Support team.

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**Properties**

**Form**  
Liquid

**Storage instructions**  
Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.

**Dissociation constant (K_D)**  
$K_D = 1.29 \times 10^{-10} \text{ M}$
Learn more about \(K_D\)

**Storage buffer**
- pH: 7.2
- Preservative: 0.01% Sodium azide
- Constituents: 40% Glycerol, 0.05% BSA, 59% PBS

**Purity**
- Protein A purified

**Clonality**
- Monoclonal

**Clone number**
- EPR1327

**Isotype**
- IgG

**Function**
Electron carrier protein. The oxidized form of the cytochrome c heme group can accept an electron from the heme group of the cytochrome c1 subunit of cytochrome reductase. Cytochrome c then transfers this electron to the cytochrome oxidase complex, the final protein carrier in the mitochondrial electron-transport chain.

Plays a role in apoptosis. Suppression of the anti-apoptotic members or activation of the pro-apoptotic members of the Bcl-2 family leads to altered mitochondrial membrane permeability resulting in release of cytochrome c into the cytosol. Binding of cytochrome c to Apaf-1 triggers the activation of caspase-9, which then accelerates apoptosis by activating other caspases.

**Involvement in disease**
Defects in CYCS are the cause of thrombocytopenia type 4 (THC4) [MIM:612004]; also known as autosomal dominant thrombocytopenia type 4. Thrombocytopenia is the presence of relatively few platelets in blood. THC4 is a non-syndromic form of thrombocytopenia. Clinical manifestations of thrombocytopenia are absent or mild. THC4 may be caused by dysregulated platelet formation.

**Sequence similarities**
Belongs to the cytochrome c family.

**Post-translational**
Binds 1 heme group per subunit.

**Applications**

**The Abpromise guarantee**
Our Abpromise guarantee covers the use of ab133504 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

<table>
<thead>
<tr>
<th>Application</th>
<th>Abreviews</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>WB</td>
<td>1/5000</td>
<td>1/5000. Detects a band of approximately 14 kDa (predicted molecular weight: 11 kDa).</td>
</tr>
<tr>
<td>IHC-P</td>
<td>1/250 - 1/500. Perform heat mediated antigen retrieval before commencing with IHC staining protocol. See IHC antigen retrieval protocols.</td>
<td></td>
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<tr>
<td>ICC/IF</td>
<td>1/100</td>
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<tr>
<td>IP</td>
<td>1/30</td>
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</tbody>
</table>

**Target**

Electron carrier protein. The oxidized form of the cytochrome c heme group can accept an electron from the heme group of the cytochrome c1 subunit of cytochrome reductase. Cytochrome c then transfers this electron to the cytochrome oxidase complex, the final protein carrier in the mitochondrial electron-transport chain.

Plays a role in apoptosis. Suppression of the anti-apoptotic members or activation of the pro-apoptotic members of the Bcl-2 family leads to altered mitochondrial membrane permeability resulting in release of cytochrome c into the cytosol. Binding of cytochrome c to Apaf-1 triggers the activation of caspase-9, which then accelerates apoptosis by activating other caspases.

Defects in CYCS are the cause of thrombocytopenia type 4 (THC4) [MIM:612004]; also known as autosomal dominant thrombocytopenia type 4. Thrombocytopenia is the presence of relatively few platelets in blood. THC4 is a non-syndromic form of thrombocytopenia. Clinical manifestations of thrombocytopenia are absent or mild. THC4 may be caused by dysregulated platelet formation.

Belongs to the cytochrome c family.

Binds 1 heme group per subunit.
modifications

Cellular localization

Mitochondrion matrix.

Images

Anti-Cytochrome C antibody [EPR1327] (ab133504) at 1/5000 dilution (purified) + Human fetal kidney tissue lysate at 10 µg

Secondary

HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 11 kDa

Observed band size: 14 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST

Immunofluorescence staining of SH-SY5Y cells with purified ab133504 at a working dilution of 1 in 100, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti rabbit (ab150077), used at a dilution of 1 in 500. ab7291 was used to stain tubulin, and this is shown in the top right hand panel. The cells were fixed in 4% PFA and permeabilized using 0.1% Triton X 100. The negative control is shown in bottom middle and right hand panels - for the negative controls, purified ab133504 was used at a dilution of 1/200 followed by an Alexa Fluor® 594 goat anti-mouse antibody at a dilution of 1/500.
Immunofluorescent analysis of HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labelling Cytochrome C with unpurified ab133504 at 1/100 dilution.

Anti-Cytochrome C antibody [EPR1327] (ab133504) at 1/5000 dilution (purified) + Human fetal heart tissue lysate at 10 µg

**Secondary**
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 11 kDa  
**Observed band size:** 14 kDa

Blocking buffer: 5% NFDM/TBST  
Dilution buffer: 5% NFDM/TBST

Anti-Cytochrome C antibody [EPR1327] (ab133504) at 1/5000 dilution (purified) + Rat brain tissue lysate at 1/1000 dilution

**Secondary**
HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 11 kDa  
**Observed band size:** 14 kDa

Blocking buffer: 5% NFDM/TBST  
Dilution buffer: 5% NFDM/TBST
Anti-Cytochrome C antibody [EPR1327] (ab133504) at 1/50000 dilution (purified) + Mouse brain tissue lysate at 10 µg

**Secondary**

HRP goat anti-rabbit (H+L) at 1/1000 dilution

**Predicted band size:** 11 kDa

**Observed band size:** 14 kDa

Blocking buffer: 5% NFDM/TBST

Dilution buffer: 5% NFDM/TBST

Immunohistochemical staining of paraffin embedded human cervical carcinoma with purified ab133504 at a working dilution of 1 in 500. The secondary antibody used is a HRP goat anti-rabbit H+L (ab97051). The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
Immunohistochemical staining of paraffin embedded mouse liver with purified ab133504 at a working dilution of 1 in 500. The secondary antibody used is a HRP goat anti-rabbit H+L (ab97051). The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.

Immunohistochemical staining of paraffin embedded rat kidney with purified ab133504 at a working dilution of 1 in 500. The secondary antibody used is a HRP goat anti-rabbit H+L (ab97051). The sample is counter-stained with hematoxylin. Antigen retrieval was performed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
Immunoprecipitation - Anti-Cytochrome C antibody [EPR1327] (ab133504)

ab133504 (purified) at 1/30 immunoprecipitating Cytochrome C in Molt-4 cells.

For western blotting, a HRP-conjugated goat anti-rabbit (H+L), was used as the secondary antibody (1/1000).

Blocking/Dilution buffer and concentration: 5% NFDM/TBST.

Western blot - Anti-Cytochrome C antibody [EPR1327] (ab133504)

All lanes: Anti-Cytochrome C antibody [EPR1327] (ab133504) at 1/10000 dilution (unpurified)

Lane 1: Molt4 lysate
Lane 2: SH-SY5Y lysate
Lane 3: Human heart lysate
Lane 4: Human kidney lysate
Lane 5: Human spleen lysate

Lysates/proteins at 10 µg per lane.

Secondary
All lanes: Goat-anti-rabbit HRP at 1/2000 dilution

Predicted band size: 11 kDa
Observed band size: 14 kDa

Equilibrium disassociation constant (K_D)
Learn more about K_D

Click here to learn more about K_D
Immunohistochemical analysis of paraffin-embedded human kidney tissue labelling Cytochrome C with unpurified ab133504 at 1/250 dilution.

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

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- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

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