


## Product datasheet

# Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker ab33985

★★★★★ 28 Abreviews 36 References 8 Images

### Overview

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<b>Product name</b>	Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker
<b>Description</b>	Mouse monoclonal [mAbcam33985] to COX IV - Mitochondrial Marker
<b>Host species</b>	Mouse
<b>Tested applications</b>	<b>Suitable for:</b> Flow Cyt, WB, IHC-Fr, ICC/IF, IHC-P
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Sheep, Cow, Human, Xenopus laevis, Monkey, African green monkey, Chinese hamster, Drosophila C virus  <b>Predicted to work with:</b> Chimpanzee, Zebrafish 
<b>Immunogen</b>	Synthetic peptide (the amino acid sequence is considered to be commercially sensitive) within Human COX IV aa 150 to the C-terminus (C terminal) conjugated to Keyhole Limpet Haemocyanin (KLH). The exact sequence is proprietary. (Peptide available as <a href="#">ab16381</a> )
<b>Positive control</b>	WB: Jurkat and HepG2 whole cell lysates and human skeletal muscle, mouse skeletal muscle and cow kidney tissue lysates.
<b>General notes</b>	This antibody clone is manufactured by Abcam.  If you require this antibody in a particular buffer formulation or a particular conjugate for your experiments, please contact <a href="mailto:orders@abcam.com">orders@abcam.com</a> or you can find further information <a href="#">here</a> .

### Properties

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<b>Form</b>	Liquid
<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
<b>Storage buffer</b>	pH: 7.40 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
<b>Purity</b>	IgG fraction
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	mAbcam33985
<b>Myeloma</b>	Sp2

## Isotype

IgG1

## Applications

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Our [Abpromise guarantee](#) covers the use of **ab33985** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt		Use 1 µg for 10 <sup>6</sup> cells. <a href="#">ab170190</a> - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.
WB	★★★★★	Use a concentration of 1 µg/ml. Detects a band of approximately 15 kDa (predicted molecular weight: 15 kDa).
IHC-Fr	★★★★★	Use at an assay dependent concentration.
ICC/IF	★★★★★	Use a concentration of 1 µg/ml.
IHC-P	★★★★☆	Use at an assay dependent concentration.

## Target

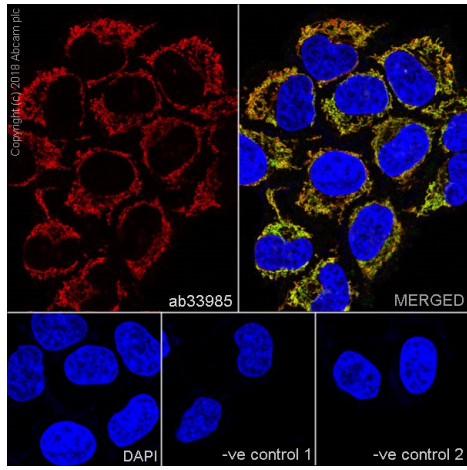
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<b>Function</b>	This protein is one of the nuclear-coded polypeptide chains of cytochrome c oxidase, the terminal oxidase in mitochondrial electron transport.
<b>Tissue specificity</b>	Ubiquitous.
<b>Sequence similarities</b>	Belongs to the cytochrome c oxidase IV family.
<b>Cellular localization</b>	Mitochondrion inner membrane.

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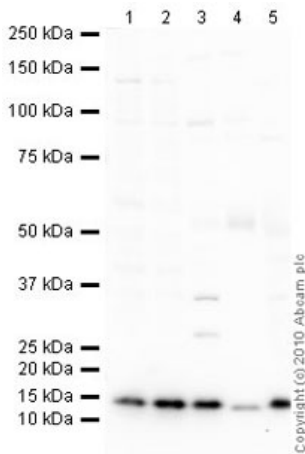
## Images

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Immunocytochemistry/ Immunofluorescence - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)

Ab33985 staining COX IV in HeLa (Human cervix adenocarcinoma epithelial cell) cells by ICC/IF (Immunocytochemistry/Immunofluorescence). Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% TritonX-100. Samples were incubated with primary antibody at 1:1000 dilution (1µg/ml). An Alexa Fluor®594 Goat anti-mouse (ab150120) was used as a secondary antibody at 1:1000 dilution (2 µg/ml). Cells were counterstained with anti-Cyclophilin F (ab231155, 5.5µg/ml) and AlexaFluor®488 Goat anti-Rabbit (ab150077, 2µg/ml). DAPI was used as a nuclear counterstain. Ab33985 was used for negative control 1 at 1:1000 dilution (1µg/ml). For negative control 2, ab231155 was used at a 1:100 dilution (5.5µg/ml) and ab150129 was used as a secondary antibody at 1:1000 dilution (2µg/ml). Confocal image showing mitochondrial staining in HeLa cell line.



Western blot - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)

**All lanes :** Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985) at 1 µg/ml

**Lane 1 :** Jurkat (Human T cell lymphoblast-like cell line) Whole Cell Lysate

**Lane 2 :** HepG2 (Human hepatocellular liver carcinoma cell line) Whole Cell Lysate

**Lane 3 :** Human skeletal muscle tissue lysate - total protein (ab29330)

**Lane 4 :** Skeletal Muscle (Mouse) Tissue Lysate

**Lane 5 :** Kidney (Cow) Tissue Lysate (ab29073)

Lysates/proteins at 10 µg per lane.

**Secondary**

**All lanes :** Goat polyclonal to Mouse IgG - H&L - Pre-Adsorbed (HRP) at 1/3000 dilution

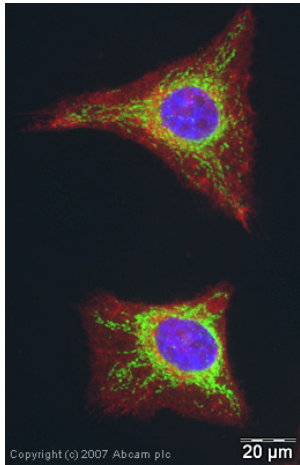
Developed using the ECL technique.

Performed under reducing conditions.

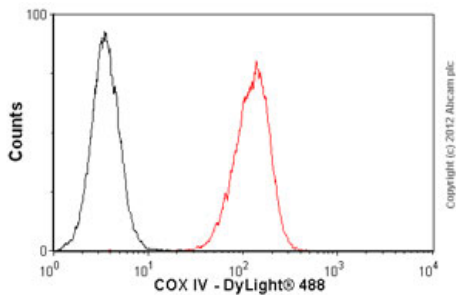
**Predicted band size:** 15 kDa

**Observed band size:** 15 kDa

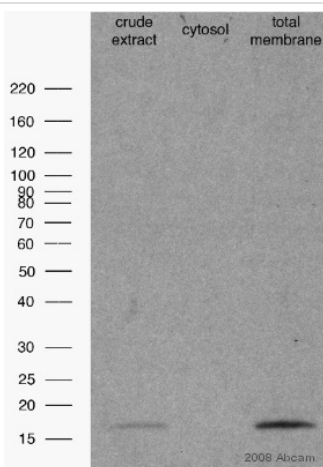
**Exposure time:** 1 minute



Immunocytochemistry/ Immunofluorescence - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)



Flow Cytometry - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)



Western blot - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)

This image is courtesy of an Abreview submitted by Dr Anne-Lore Schlaitz

ICC/IF image of ab33985 stained human HeLa cells. The cells were PFA fixed (10 min), permeabilised in TBS-T (20 min) and incubated with the antibody (ab33985, 1µg/ml) for 1h at room temperature. 1%BSA / 10% normal serum / 0.3M glycine was used to quench autofluorescence and block non-specific protein-protein interactions. The secondary antibody (green) was Alexa Fluor<sup>®</sup> 488 goat anti-mouse IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor<sup>®</sup> 594 WGA was used to label plasma membranes (red). DAPI was used to stain the cell nuclei (blue).

Overlay histogram showing HeLa cells stained with ab33985 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab33985, 1µg/1x10<sup>6</sup> cells) for 30 min at 22°C. The secondary antibody used was DyLight<sup>®</sup> 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 2µg/1x10<sup>6</sup> cells) used under the same conditions. Acquisition of >5,000 events was performed.

**All lanes :** Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985) at 1/1000 dilution

**Lane 1 :** Crude extract prepared from *Xenopus laevis* egg

**Lane 2 :** Cytosol lysate prepared from *Xenopus laevis* egg extract

**Lane 3 :** Total membrane lysate prepared from *Xenopus laevis* egg extract

Lysates/proteins at 15 µg per lane.

### Secondary

**All lanes :** HRP conjugated donkey anti-mouse IgG at 1/4000 dilution

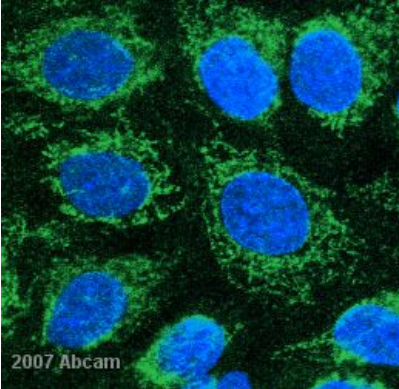
Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 15 kDa

**Observed band size:** 15 kDa

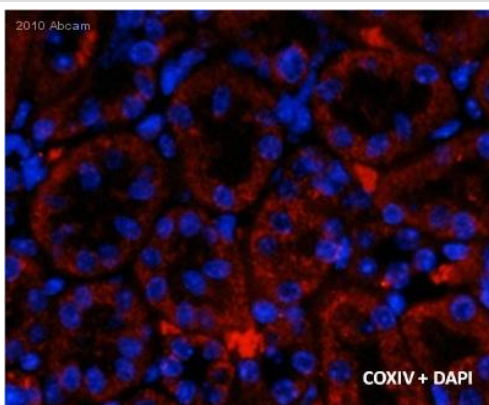
**Exposure time:** 90 minutes



Immunocytochemistry/ Immunofluorescence - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)

This image is courtesy of an anonymous Abreview

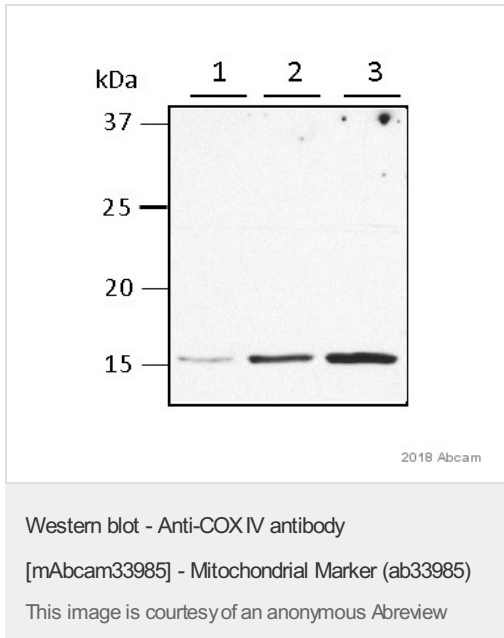
ab33985 staining COX IV in human proximal tubular epithelial cells by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with paraformaldehyde, permeabilized with 0.5% Triton X-100 in PBS and blocked with 3% BSA for 15 minutes at 20°C. Samples were incubated with primary antibody (1/200 in PBS) for 45 minutes at 20°C. ab6785, a FITC-conjugated goat anti-mouse IgG (H+L) polyclonal was used as the secondary antibody (1/1000).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985)

This image is courtesy of an anonymous Abreview

ab33985 staining COX IV in mouse kidney (tubules) tissue sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde, permeabilized with 0.2% triton X-100 and blocked with 5% serum for 1 hour at 25°C; antigen retrieval was by heat mediation in sodium citrate buffer pH 6. Samples were incubated with primary antibody (1/200 in PBS) for 9 hours at 4°C. An Alexa Fluor<sup>®</sup> 594-conjugated goat anti-mouse IgG polyclonal (1/500) was used as the secondary antibody. DAPI was used for staining the nucleus.



**All lanes :** Anti-COX IV antibody [mAbcam33985] - Mitochondrial Marker (ab33985) at 1/1000 dilution

**All lanes :** cow liver membrane with Milk

Lysates/proteins at 15 µg per lane.

Blocking peptides at 1.5 % per lane.

#### Secondary

**All lanes :** Goat Anti-mouse IgG HRP at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

**Predicted band size:** 15 kDa

**Exposure time:** 17 hours

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