abcam

Product datasheet

Anti-Catalase antibody [EPR20198] - Peroxisome Marker ab209211

KO VALIDATED Recombinant RabMAb

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Overview

Product name	Anti-Catalase antibody [EPR20198] - Peroxisome Marker
Description	Rabbit monoclonal [EPR20198] to Catalase - Peroxisome Marker
Host species	Rabbit
Tested applications	**Suitable for:** WB, ICC/IF, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: Mouse brain, heart, spleen and kidney lysates; rat heart and brain lysates; C6, PC-12, NIH/3T3, HepG2, 293 and C2C12 whole cell lysates; Human fetal brain, fetal heart and fetal kidney lysates. ICC/IF: C2C12 and NIH/3T3 cells. Flow Cyt (intra): C2C12 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**.

Properties

Form	Liquid
Storage instructions	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.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal

Clone number	EPR20198
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab209211 in the following tested applications.

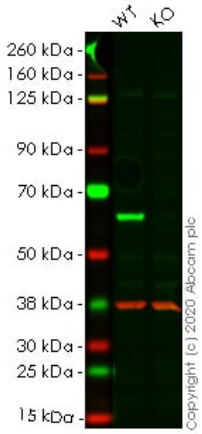
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★★★ **(2)**	1/2000. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa).
ICC/IF		1/100.
Flow Cyt (Intra)		1/60. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target

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



Western blot - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

All lanes : Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211) at 1/2000 dilution

Lane 1 : Wild-type HeLa cell lysate
Lane 2 : CAT knockout HeLa cell lysate

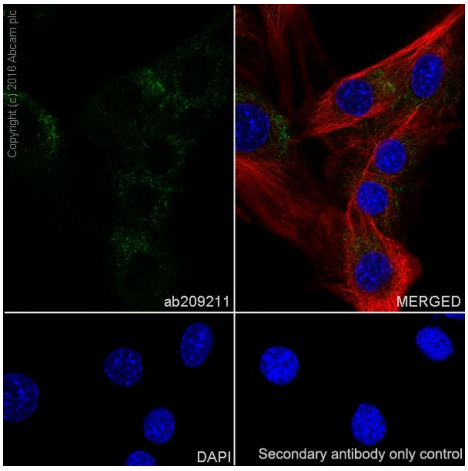
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 60 kDa
Observed band size: 60 kDa

Lanes 1-2: Merged signal (red and green). Green - ab209211 observed at 60 kDa. Red - loading control **ab8245** observed at 37 kDa.

ab209211 Anti-Catalase antibody [EPR20198] - Peroxisome Marker was shown to specifically react with Catalase in wild-type HeLa cells. Loss of signal was observed when knockout cell line **ab265250** (knockout cell lysate **ab256859**) was used. Wild-type and Catalase knockout samples were subjected to SDS-PAGE. ab209211 and Anti-GAPDH antibody [6C5] - Loading Control (**ab8245**) were incubated overnight at 4°C at 1 in 2000 and 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preadsorbed (**ab216773**) and Goat anti-Mouse IgG H&L (IRDye® 680RD) preadsorbed (**ab216776**) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

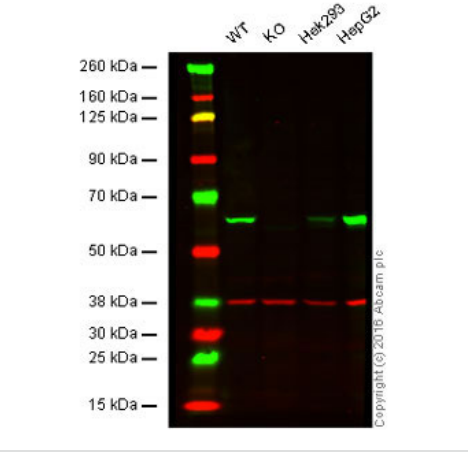


Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized C2C12 (Mouse myoblast cell line) cells labeling Catalase with ab209211 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on C2C12 cell line. The nuclear counterstain is DAPI (blue).

Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.



Western blot - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

All lanes : Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211) at 1/2000 dilution

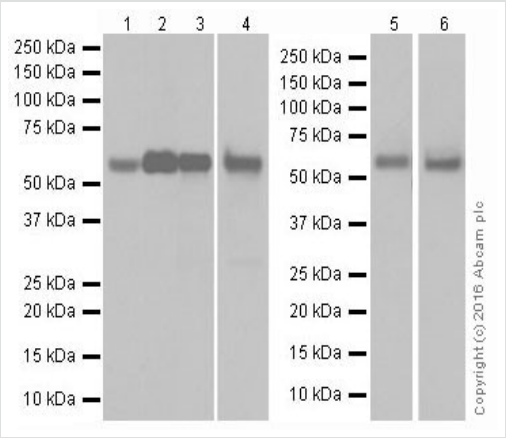
Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : CAT knockout HAP1 whole cell lysate
Lane 3 : Hek293 whole cell lysate
Lane 4 : HepG2 whole cell lysate

Lysates/proteins at 20 µg per lane.

Predicted band size: 60 kDa

Lanes 1 - 4: Merged signal (red and green). Green - ab209211 observed at 60 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab209211 was shown to specifically react with CAT in wild-type HAP1 cells. No band was observed when CAT knockout samples were examined. Wild-type and CAT knockout samples were subjected to SDS-PAGE. Ab209211 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/2000 dilution and 1/10,000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) **ab216773** and Goat anti-Mouse IgG H&L (IRDye® 680RD) **ab216776** secondary antibodies at 1/10,000 dilution for 1 hour at room temperature before imaging.



Western blot - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

All lanes : Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211) at 1/2000 dilution

Lane 1 : Mouse brain lysate
Lane 2 : Mouse heart lysate
Lane 3 : Mouse spleen lysate
Lane 4 : Mouse kidney lysate
Lane 5 : Rat heart lysate
Lane 6 : Rat brain lysate

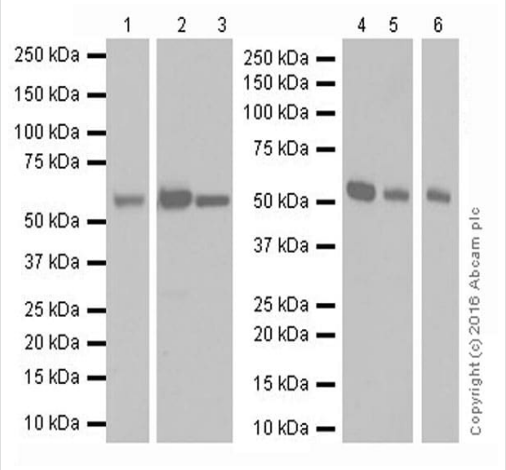
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 60 kDa
Observed band size: 60 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1-3: 5 seconds; Lane 4/5: 1 second; Lane 6: 3 seconds.



Western blot - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

All lanes : Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211) at 1/2000 dilution

Lane 1 : C6 (Rat glial tumor cell line) whole cell lysate
Lane 2 : PC-12 (Rat adrenal gland pheochromocytoma cell line) whole cell lysate
Lane 3 : NIH/3T3 (Mouse embryonic fibroblast cell line) whole cell lysate
Lane 4 : HepG2 (Human liver hepatocellular carcinoma cell line) whole cell lysate
Lane 5 : HEK-293 (Human epithelial cell line from embryonic kidney) whole cell lysate
Lane 6 : C2C12 (Mouse myoblast cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

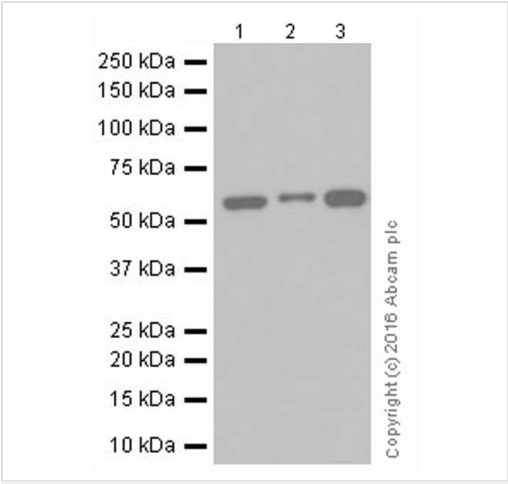
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at

1/100000 dilution

Predicted band size: 60 kDa
Observed band size: 60 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1: 1 second; Lane 2/3/6: 3 seconds; Lane 4/5: 30 seconds.



Western blot - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

All lanes : Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211) at 1/2000 dilution

Lane 1 : Human fetal brain lysate
Lane 2 : Human fetal heart lysate
Lane 3 : Human fetal kidney lysate

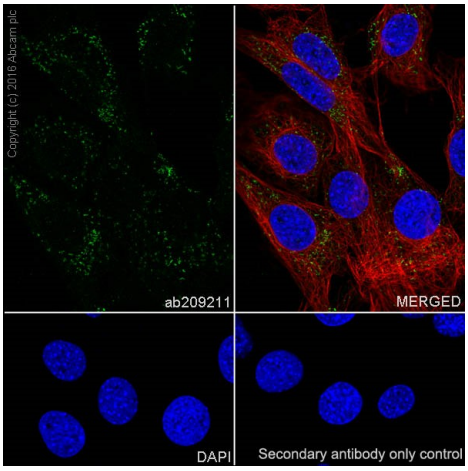
Lysates/proteins at 10 µg per lane.

Secondary
All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 60 kDa
Observed band size: 60 kDa

Exposure time: 1 minute

Blocking/Dilution buffer: 5% NFDM/TBST.

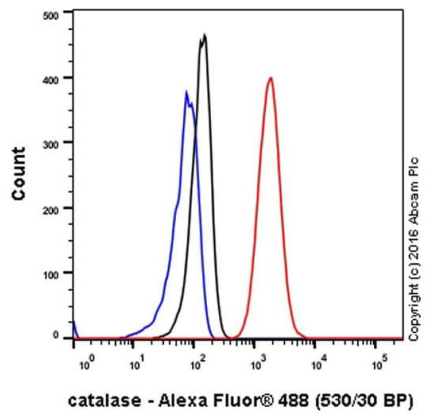


Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

ImmunoFluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized NIH/3T3 (Mouse embryonic fibroblast cell line) cells labeling Catalase with ab209211 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on NIH/3T3 cell line. The nuclear counterstain is DAPI (blue).

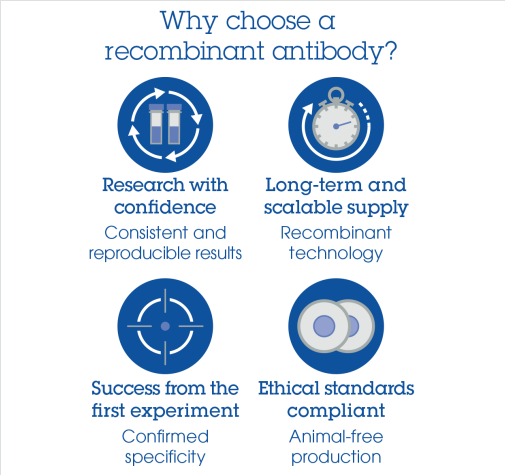
Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (**ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed C2C12 (Mouse myoblast cell line) cells labeling Catalase with ab209211 at 1/60 dilution (red) compared withRabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Anti-Catalase antibody [EPR20198] - Peroxisome Marker (ab209211)

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