

## Product datasheet

# Anti-Catalase antibody [EPR20198] - BSA and Azide free ab223793

KO VALIDATED

Recombinant

RabMAb

[1 References](#) [6 Images](#)

### Overview

<b>Product name</b>	Anti-Catalase antibody [EPR20198] - BSA and Azide free
<b>Description</b>	Rabbit monoclonal [EPR20198] to Catalase - BSA and Azide free
<b>Host species</b>	Rabbit
<b>Tested applications</b>	<b>Suitable for:</b> ICC/IF, WB, Flow Cyt (Intra)
<b>Species reactivity</b>	<b>Reacts with:</b> Mouse, Rat, Human
<b>Immunogen</b>	Recombinant fragment. This information is proprietary to Abcam and/or its suppliers.
<b>Positive control</b>	WB: Mouse brain, heart, spleen and kidney lysates; rat heart and brain lysates; HeLa, 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.
<b>General notes</b>	ab223793 is the carrier-free version of <a href="#">ab209211</a> .

Our **carrier-free** antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. The carrier-free buffer and high concentration allow for increased conjugation efficiency.

This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our **conjugation kits** for antibody conjugates that are ready-to-use in as little as 20 minutes with <1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

This product is compatible with the Maxpar<sup>®</sup> Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar<sup>®</sup> is a trademark of Fluidigm Canada Inc.

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

### Properties

**Form** Liquid

<b>Storage instructions</b>	Shipped at 4°C. Store at +4°C. Do Not Freeze.
<b>Storage buffer</b>	pH: 7.2 Constituent: PBS
<b>Carrier free</b>	Yes
<b>Purity</b>	Protein A purified
<b>Clonality</b>	Monoclonal
<b>Clone number</b>	EPR20198
<b>Isotype</b>	IgG

## Applications

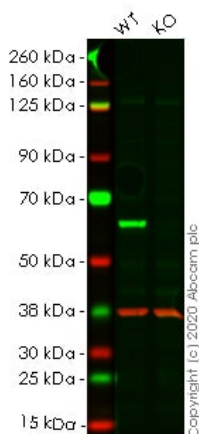
**The Abpromise guarantee** Our **Abpromise guarantee** covers the use of ab223793 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa).
Flow Cyt (Intra)		Use at an assay dependent concentration. <b>ab199376</b> - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

## Target

<b>Function</b>	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.
<b>Involvement in disease</b>	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.
<b>Sequence similarities</b>	Belongs to the catalase family.
<b>Post-translational modifications</b>	The N-terminus is blocked.
<b>Cellular localization</b>	Peroxisome.

## Images



Western blot - Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

**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.

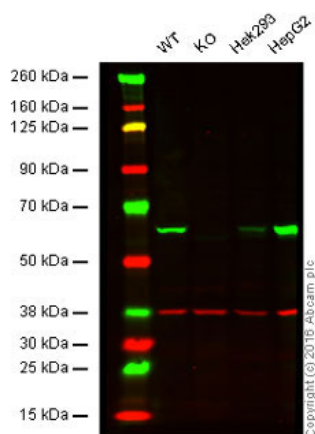
**Predicted band size:** 60 kDa

**Observed band size:** 60 kDa

This data was developed using the same antibody clone in a different buffer formulation ([ab209211](#)).

**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] 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.



Western blot - Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

**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

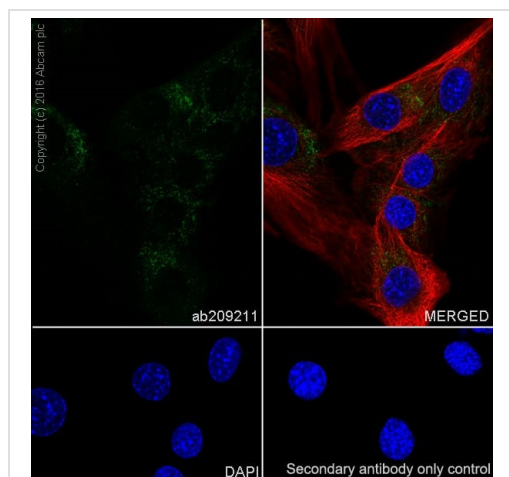
Lysates/proteins at 20 µg per lane.

**Predicted band size:** 60 kDa

This WB data was generated using the same anti-Catalase antibody clone [EPR20198] in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (cat# [ab209211](#)).

**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 when CAT knockout samples were used. 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 1/10000 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 1/10000 dilution for 1 hour at room temperature before imaging.



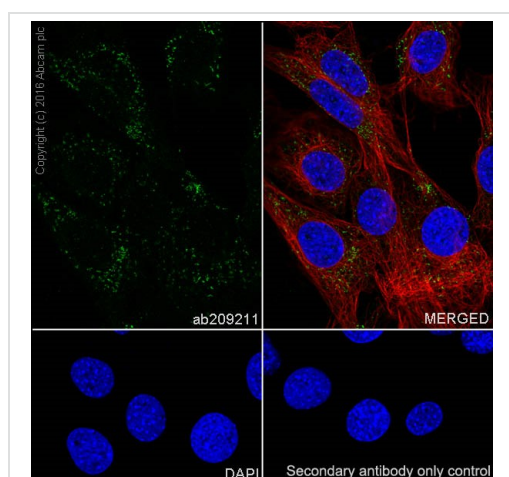
Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209211**).



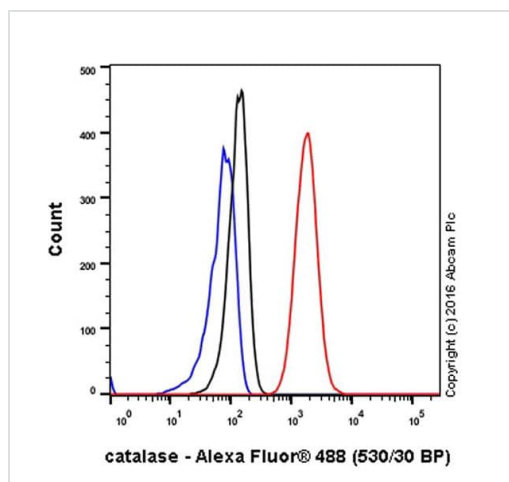
Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209211**).



Flow Cytometry (Intracellular) - Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed C2C12 (Mouse myoblast cell line) cells labeling Catalase with **ab209211** at 1/60 dilution (red) compared with Rabbit 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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab209211**).

Why choose a recombinant antibody?

 <p><b>Research with confidence</b> Consistent and reproducible results</p>	 <p><b>Long-term and scalable supply</b> Recombinant technology</p>
 <p><b>Success from the first experiment</b> Confirmed specificity</p>	 <p><b>Ethical standards compliant</b> Animal-free production</p>

Anti-Catalase antibody [EPR20198] - BSA and Azide free (ab223793)

**Please note:** All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

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