

Product datasheet

Anti-Catalase antibody [EP1929Y] - Peroxisome Marker ab76024

KO **VALIDATED** Recombinant RabMAb[®]

★★★★★ 1 Abreviews 12 References 6 Images

Overview

Product name	Anti-Catalase antibody [EP1929Y] - Peroxisome Marker
Description	Rabbit monoclonal [EP1929Y] to Catalase - Peroxisome Marker
Host species	Rabbit
Tested applications	Suitable for: ICC/IF, WB, IHC-P Unsuitable for: Flow Cyt or IP
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide within Human Catalase aa 400-500 (C terminal). The exact sequence is proprietary. Database link: P04040 (Peptide available as ab225865)
Positive control	WB: HeLa cell lysate. IHC-P: human brain tissue, human bladder cancer tissue. ICC/IF: HeLa cells.
General notes	Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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

Reproducibility is key to advancing scientific discovery and accelerating scientists' next breakthrough.

Abcam is leading the way with our range of recombinant antibodies, knockout-validated antibodies and knockout cell lines, all of which support improved reproducibility.

We are also planning to innovate the way in which we present recommended applications and species on our product datasheets, so that only applications & species that have been tested in our own labs, our suppliers or by selected trusted collaborators are covered by our Abpromise[™] guarantee.

In preparation for this, we have started to update the applications & species that this product is Abpromise guaranteed for.

We are also updating the applications & species that this product has been "predicted to work

with," however this information is not covered by our Abpromise guarantee.

Applications & species from publications and Abreviews that have not been tested in our own labs or in those of our suppliers are not covered by the Abpromise guarantee.

Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, as well as customer reviews and Q&As.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C. Avoid freeze / thaw cycles.
Storage buffer	pH: 7.20 Preservative: 0.05% Sodium azide Constituents: 0.1% BSA, 40% Glycerol (glycerin, glycerine), 9.85% Tris glycine, 50% Tissue culture supernatant
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	EP1929Y
Isotype	IgG

Applications

Our [Abpromise guarantee](#) covers the use of **ab76024** 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		1/100 - 1/250.
WB	★★★★★	1/10000 - 1/20000. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa).
IHC-P		1/100 - 1/1000. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

Application notes Is unsuitable for Flow Cyt or IP.

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.

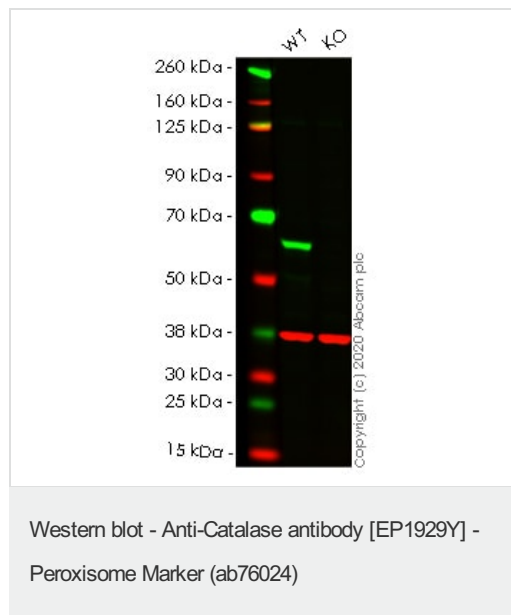
Post-translational modifications

The N-terminus is blocked.

Cellular localization

Peroxisome.

Images



All lanes : Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024) at 1/10000 dilution

Lane 1 : Wild-type HeLa cell lysate

Lane 2 : CAT knockout HeLa cell lysate

Lysates/proteins at 20 µg per lane.

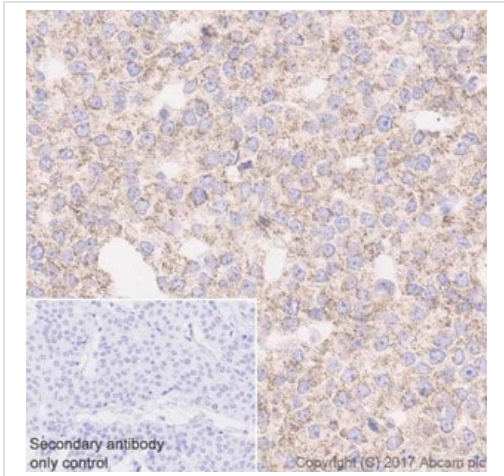
Performed under reducing conditions.

Predicted band size: 60 kDa

Observed band size: 60 kDa

Lanes 1-2: Merged signal (red and green). Green - ab76024 observed at 60 kDa. Red - loading control [ab8245](#) observed at 37 kDa.

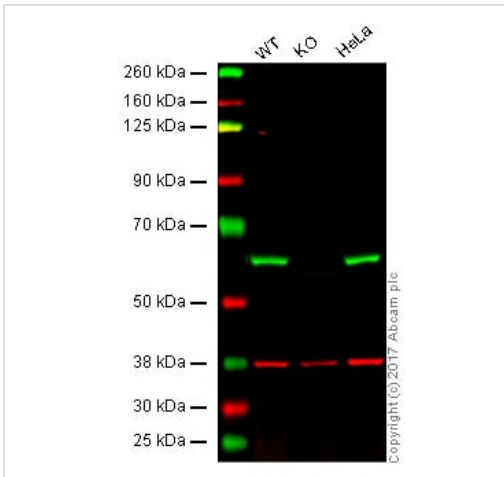
ab76024 Anti-Catalase antibody [EP1929Y] - Peroxisome Marker was shown to specifically react with Catalase in wild-type HeLa cells. Loss of signal was observed when knockout cell line [ab265250](#) (knockout cell lysate [ab256859](#)) was used. Wild-type and Catalase knockout samples were subjected to SDS-PAGE. ab76024 and Anti-GAPDH antibody [6C5] - Loading Control ([ab8245](#)) were incubated overnight at 4°C at 1 in 10000 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.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)

Immunohistochemical analysis of Paraffin-embedded human bladder cancer tissue sections labeling Catalase with ab76024 at 1/1000. Goat Anti-Rabbit IgG H&L (HRP) was used as the secondary antibody. Sections were counterstained with Hematoxylin. Antigen retrieval was heat mediated using ab93684 (Tris/EDTA buffer, pH 9.0).

Granular cytoplasmic staining on human bladder cancer.



Western blot - Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)

All lanes : Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)

Lane 1 : Wild-type HAP1 whole cell lysate

Lane 2 : CAT knockout HAP1 whole cell lysate

Lane 3 : HeLa whole cell lysate

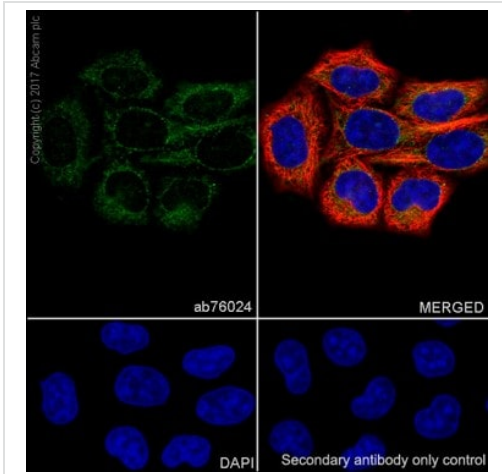
Lysates/proteins at 20 µg per lane.

Predicted band size: 60 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab76024 observed at 60 kDa. Red - loading control, ab9484, observed at 37 kDa.

ab76024 was shown to specifically react with CAT when CAT knockout samples were used. Wild-type and CAT knockout samples were subjected to SDS-PAGE. Ab76024 and ab9484 (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/5000 dilution and 1/20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye® 800CW) preabsorbed ab216773 and Goat anti-Mouse IgG H&L (IRDye® 680RD) preabsorbed ab216776 secondary antibodies at 1/20000

dilution for 1 hour at room temperature before imaging.



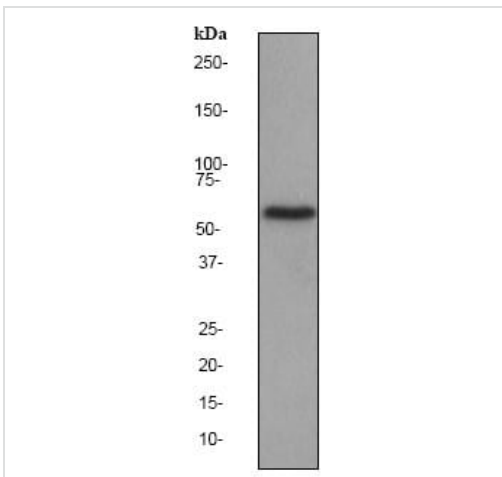
Immunocytochemistry/Immunofluorescence analysis of HeLa (human cervix adenocarcinoma epithelial cell) labeling Catalase ab76024 at 1/100. Cells were fixed with 100% Methanol.

ab150077, an Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/1000) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.

ab195889, Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/100 was used as counterstain antibody.

Confocal image showing membranous staining in HeLa cells.

Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)



Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024) at 1/20000 dilution + HeLa cell lysate at 10 µg

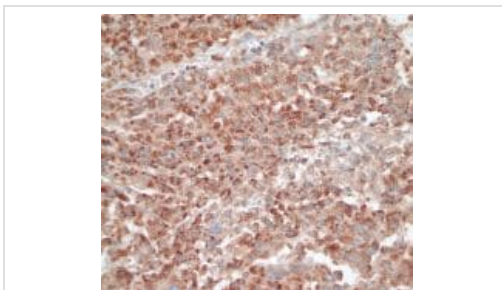
Secondary

HRP labelled goat anti-rabbit at 1/2000 dilution

Predicted band size: 60 kDa

Observed band size: 60 kDa

Western blot - Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)



Immunohistochemical staining of Catalase in paraffin embedded human normal brain tissue using ab76024 at a 1/100 dilution.

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (ab76024)

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

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