abcam

Product datasheet

Anti-Catalase antibody [EP1929Y] - BSA and Azide free ab227116

KO VALIDATED Recombinant RabMAb

3 References 6 Images

Overview

Product name	Anti-Catalase antibody [EP1929Y] - BSA and Azide free
Description	Rabbit monoclonal [EP1929Y] to Catalase - BSA and Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF **Unsuitable for:** Flow Cyt or IP
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: HeLa cell lysate. IHC-P: human brain tissue. ICC/IF: HeLa cells.
General notes	ab227116 is the carrier-free version of **ab76024**. 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® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc. Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to **RabMAb® patents**. Rat: We have preliminary internal testing data to indicate this antibody may not react with this species. Please contact us for more information.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.20 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EP1929Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227116 in the following tested applications.

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

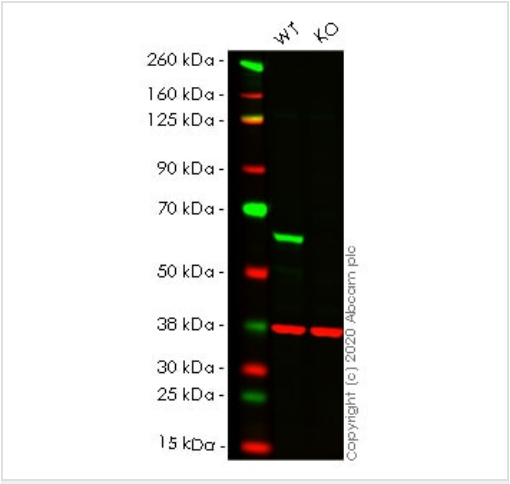
Application	Abreviews	Notes
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 60 kDa (predicted molecular weight: 60 kDa).
ICC/IF		Use at an assay dependent concentration.

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



Western blot - Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

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.

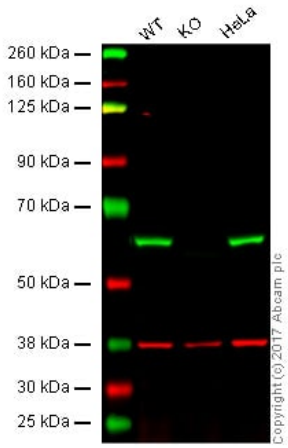
Performed under reducing conditions.

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

This data was developed using the same antibody clone in a different buffer formulation (**ab76024**).

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.



Western blot - Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

All lanes : Anti-Catalase antibody [EP1929Y] - Peroxisome Marker (**ab76024**) at 1/5000 dilution

Lane 1 : Wild-type HAP1 whole cell lysate
Lane 2 : CAT knockout HAP1 whole cell lysate
Lane 3 : HeLa whole cell lysate

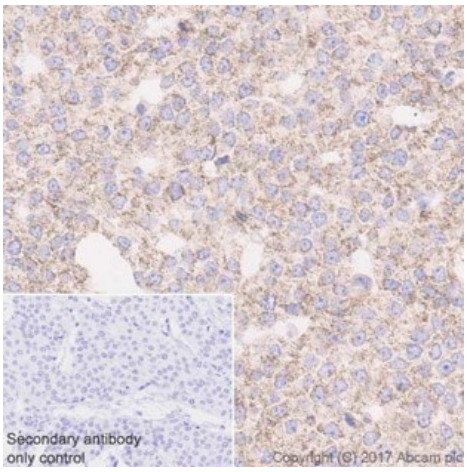
Lysates/proteins at 20 µg per lane.

Predicted band size: 60 kDa

This WB data was generated using the same anti-Catalase antibody clone, EP1929Y, in a different buffer formulation (cat# **ab76024**).

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.

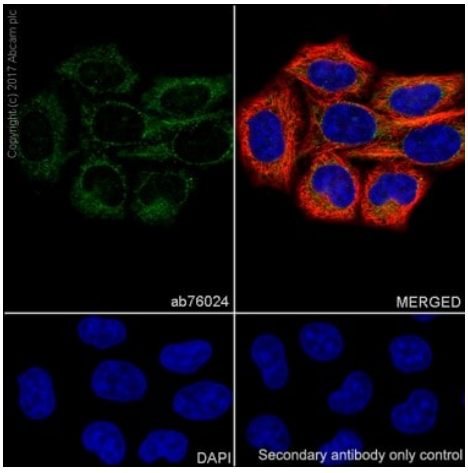


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76024**).



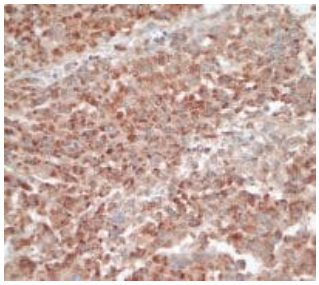
Immunocytochemistry/ Immunofluorescence - Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76024**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

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.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab76024**).

Anti-Catalase antibody [EP1929Y] - BSA and Azide free (ab227116)

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