

Product datasheet

Anti-Catalase antibody [12C2DB9] - Peroxisome Marker ab110292

KO VALIDATED

★★★★★ [3 Abreviews](#) [3 References](#) [4 Images](#)

Overview

Product name	Anti-Catalase antibody [12C2DB9] - Peroxisome Marker
Description	Mouse monoclonal [12C2DB9] to Catalase - Peroxisome Marker
Host species	Mouse
Tested applications	Suitable for: ICC, IP, Flow Cyt
Species reactivity	Reacts with: Rat, Cow, Human
Immunogen	Tissue, cells or virus. This information is considered to be commercially sensitive.
Positive control	HeLa cells, HepG2 cells, HL60 cells, Cow heart, Rat liver Flow cyt: HAP1-WT cells.
General notes	<p>This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com.</p> <p>The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.</p> <p>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, along with publications, customer reviews and Q&As</p> <p>Product was previously marketed under the MitoSciences sub-brand.</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	<p>pH: 7.5</p> <p>Preservative: 0.02% Sodium azide</p> <p>Constituent: HEPES buffered saline</p>
Purity	Ammonium Sulphate Precipitation
Purification notes	Purity near homogeneity as judge by SDS-PAGE. The antibody was produced in-vitro using

	hybridomas grown in serum-free medium and then purified by biochemical fractionation.
Clonality	Monoclonal
Clone number	12C2DB9
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab110292 in the following tested applications.

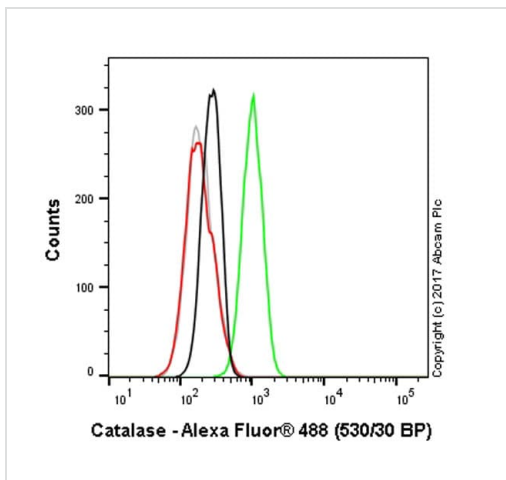
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC	★★★★★ (1)	Use a concentration of 5 µg/ml.
IP		Use at an assay dependent concentration.
Flow Cyt		Use a concentration of 1 µg/ml. ab170190 - Mouse monoclonal IgG1, 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

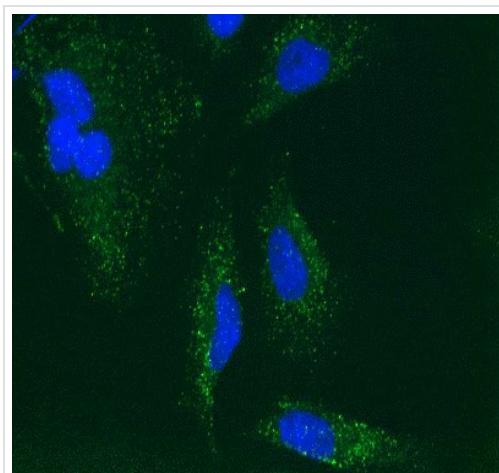


Flow Cytometry - Anti-Catalase antibody [12C2DB9]
- Peroxisome Marker (ab110292)

Overlay histogram showing HAP1 wildtype (green line) and HAP1-CAT knockout cells (red line) stained with ab110292. The cells were fixed with 4% formaldehyde (10 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab110292, 1 µg/ml) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-mouse IgG (H&L) presorbed ([ab150117](#)) at 1/2000 dilution for 30 min at 22°C.

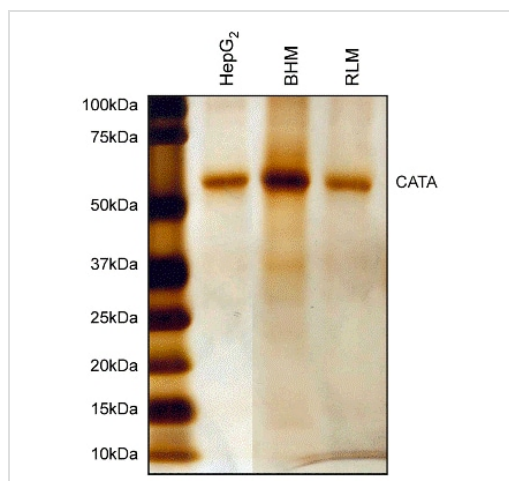
A mouse IgG1 isotype control antibody ([ab170190](#)) was used at the same concentration and conditions as the primary antibody (HAP1 wildtype - black line, HAP1-CAT knockout - grey line). Unlabelled sample was also used as a control (this line is not shown for the purpose of simplicity).

Acquisition of >5,000 events were collected using a 50 mW Blue laser (488nm) and 530/30 bandpass filter.



Immunocytochemistry - Anti-Catalase antibody
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Immunocytochemical staining of Human HeLa cells. The cells were paraformaldehyde fixed (4%, 20 minutes) and Triton X-100 permeabilized (0.1%, 15 minutes). The cells were incubated with the ab110292 (5 µg/ml) for 2 hours at room temperature or overnight at 4°C. The secondary antibody, Alexa Fluor® 488 goat anti-mouse IgG (green), was used at a 1/1000 dilution for 1 hour. 10% Goat serum was used as the blocking agent for all blocking steps. DAPI was used to stain the cell nuclei (blue). The target protein locates mainly in peroxisomes.



Immunoprecipitation - Anti-Catalase antibody
[12C2DB9] - Peroxisome Marker (ab110292)

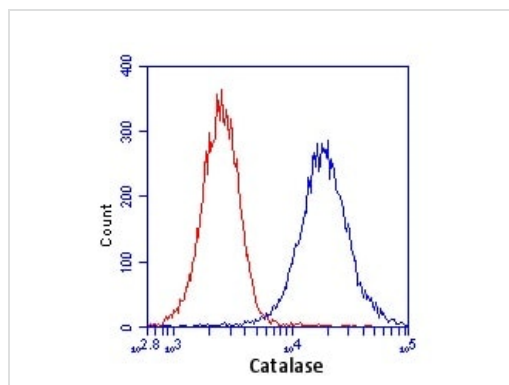
Immunoprecipitation of Catalase using ab110292 from:

Lane 1: HepG2 cells

Lane 2: Cow heart sample

Lane 3: Rat liver sample

Predicted band size is 60 kDa.



Flow Cytometry - Anti-Catalase antibody [12C2DB9]
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Flow cytometric analysis of HL-60 cells using ab110292 at 1 µg/mL,
(blue) or an isotype control (red).

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