abcam

Product datasheet

Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free ab215996

Recombinant RabMAb

1 Abreviews 25 References 14 Images

Overview

Product name	Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free
Description	Rabbit monoclonal [EP1933Y] to ALDH1A1 - BSA and Azide free
Host species	Rabbit
Specificity	The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse.
Tested applications	**Suitable for:** Flow Cyt (Intra), ICC/IF, WB, IP, IHC-P
Species reactivity	**Reacts with:** Mouse, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	IP: HepG2 cell lysate; IHC-P: Human liver tissue, Human bladder carcinomaFlow Cyt (intra): HepG2 cells
General notes	ab215996 is the carrier-free version of **ab52492**. 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. 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**.

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	EP1933Y
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab215996 in the following tested applications.

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

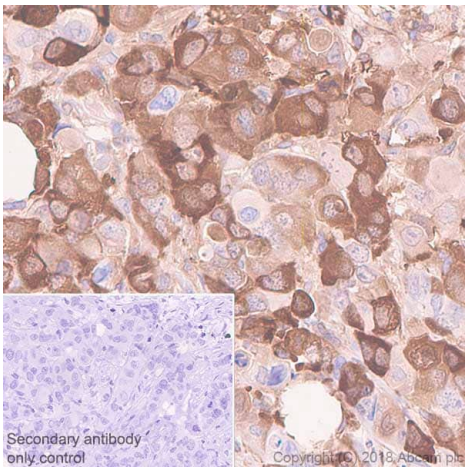
Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. **ab199376** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
ICC/IF		Use at an assay dependent concentration.
WB		Use at an assay dependent concentration. Detects a band of approximately 55 kDa (predicted molecular weight: 55 kDa).
IP		Use at an assay dependent concentration.
IHC-P	★☆☆☆☆ (1)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol. See **IHC antigen retrieval protocols**. The mouse recommendation is based on the WB results. We do not guarantee IHC-P for mouse.

Target

Function Binds free retinal and cellular retinol-binding protein-bound retinal. Can convert/oxidize retinaldehyde to retinoic acid.

Pathway	Cofactor metabolism; retinol metabolism.
Sequence similarities	Belongs to the aldehyde dehydrogenase family.
Cellular localization	Cytoplasm.

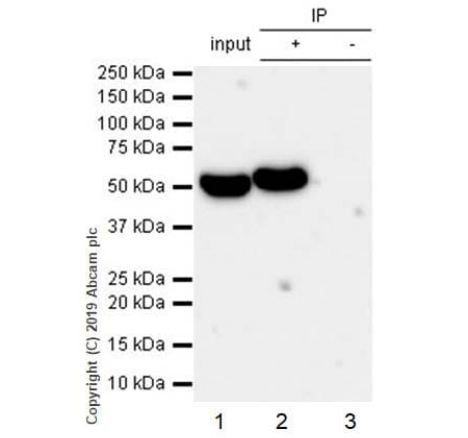
Images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast carcinoma tissue sections labeling ALDH1A1 with purified **ab52492** at 1/50 dilution (3.54 µg/ml). Perform heat mediated antigen retrieval using **ab93684** (Tris/EDTA buffer, pH 9.0). ImmunoHistoProbe one step HRP Polymer (ready to use) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

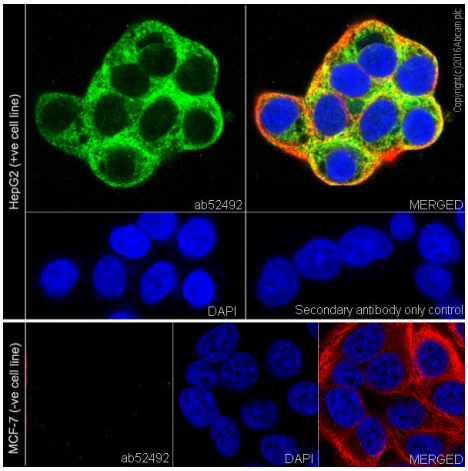
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunoprecipitation - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

ab52492 (purified) at 1/20 dilution (2ug) immunoprecipitating ALDH1A1 in HepG2 whole cell lysates.
Lane 1: HepG2 (Human hepatocellular carcinoma epithelial cell) whole cell lysates 10ug
Lane 2 (+): **ab52492** & HepG2 whole cell lysates
Lane 3 (-): Rabbit monoclonal IgG (**ab172730**) instead of **ab52492** in HepG2 whole cell lysates
For western blotting, VeriBlot for IP Detection Reagent (HRP) (**ab131366**) was used at 1/1000 dilution.
Blocking and diluting buffer: 5% NFDM/TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunocytochemistry/ Immunofluorescence - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

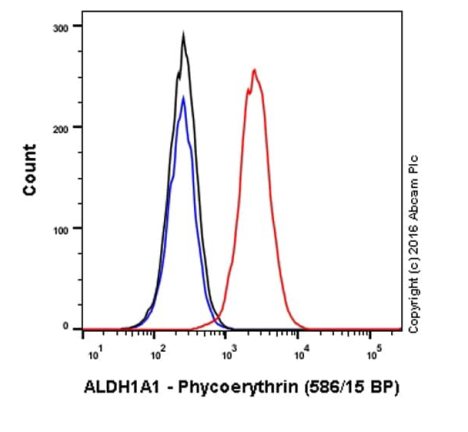
Immunocytochemistry/ Immunofluorescence analysis of HepG2 (Human liver hepatocellular carcinoma cell line) cells labeling ALDH1A1 with **ab52492** (purified) at 1/500 dilution (4 µg/ml).

Cells were fixed in 100% methanol. **ab150077**, an AlexaFluor®488 Goat anti-Rabbit secondary antibody was used at 1/1000 dilution (2 µg/ml). **ab195889**, Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) was used to counterstain at 1/200 dilution (2.5 µg/ml). DAPI was used as nuclear counterstain.

Confocal image showing cytoplasmic staining on HepG2 cell line.

Negative control: No staining on MCF-7 cell line.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



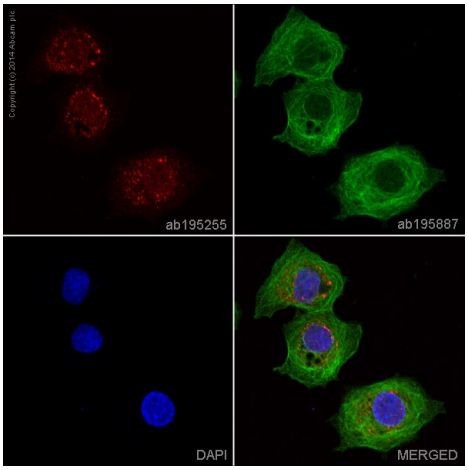
Flow Cytometry (Intracellular) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Clone EP1933Y (ab215996) has been successfully conjugated by Abcam. This image was generated using Anti-ALDH1A1 antibody [EP1933Y] (PE). Please refer to **ab209437** for protocol details.

Overlay histogram showing MCF7 cells stained with **ab209437** (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min at 22°C. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (**ab209437**, 1/500 dilution) for 30 min at 22°C.

Isotype control antibody (black line) was rabbit IgG (monoclonal) Phycoerythrin (**ab209478**) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Yellow/Green laser (561nm) and 586/15 bandpass filter.

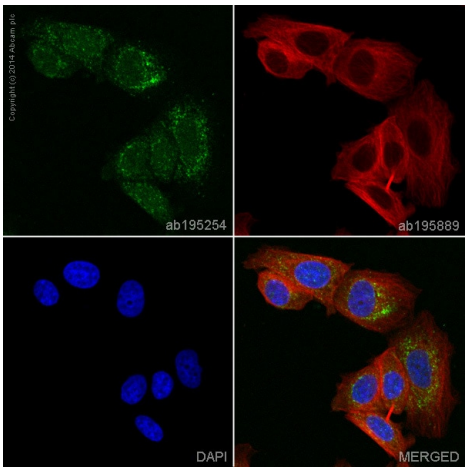


Immunocytochemistry/ Immunofluorescence - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Clone EP1933Y (ab215996) has been successfully conjugated by Abcam. This image was generated using Anti-ALDH1A1 antibody [EP1933Y] (Alexa Fluor® 647). Please refer to **ab195255** for protocol details.

ab195255 staining ALDH1A1 in MCF7 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilized in 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with **ab195255** at a working dilution of 1 in 50 (shown in red) and **ab195887**, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 488, shown in green) at 2µg/ml overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).

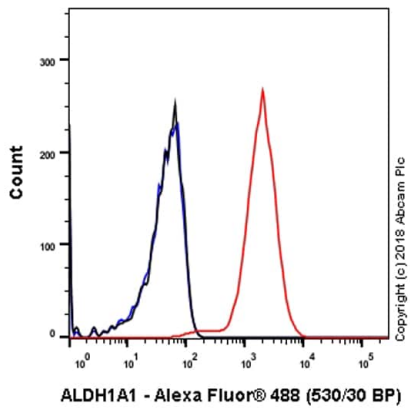


Immunocytochemistry/ Immunofluorescence - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Clone EP1933Y (ab215996) has been successfully conjugated by Abcam. This image was generated using Anti-ALDH1A1 antibody [EP1933Y] (Alexa Fluor® 488). Please refer to **ab195254** for protocol details.

ab195254 staining ALDH1A1 in MCF7 cells. The cells were fixed with 4% formaldehyde (10 min), permeabilised in 0.1% Triton X-100 for 5 minutes and then blocked in 1% BSA/10% normal goat serum/0.3M glycine in 0.1% PBS-Tween for 1h. The cells were then incubated with **ab195254** at a working dilution of 1 in 100 (shown in green) and **ab195889**, Mouse monoclonal [DM1A] to alpha Tubulin (Alexa Fluor® 594, shown in red) at 2µg/ml overnight at +4°C. Nuclear DNA was labelled in blue with DAPI.

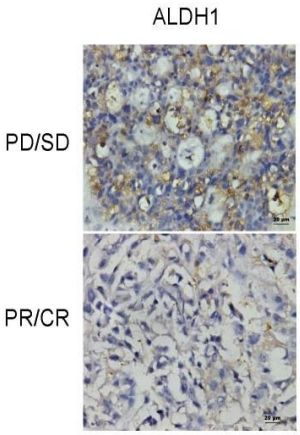
Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8).



Flow Cytometry (Intracellular) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Intracellular Flow Cytometry analysis of HepG2 (Human hepatocellular carcinoma epithelial cell) cells labeling ALDH1A1 with purified **ab52492** at 1/20 dilution (10µg/ml) (red). Cells were fixed with 4% Paraformaldehyde and permeabilised with 90% Methanol. A Goat anti rabbit IgG (Alexa Fluor® 488, **ab150077**) secondary antibody was used at 1/2000. Isotype control - Rabbit monoclonal IgG (Black). Unlabeled control - Cell without incubation with primary antibody and secondary antibody (Blue).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Image from Gong et al PLoS One. 2010 Dec 20;5(12):e15630. doi: 10.1371/journal.pone.0015630. Fig 1.

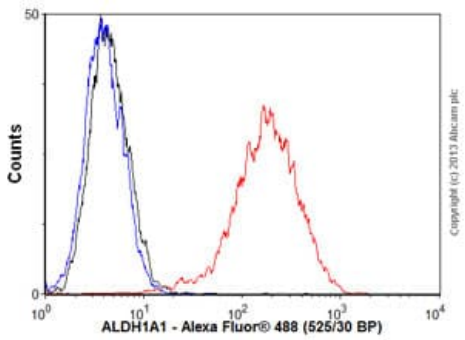
Tumor tissues of primary invasive ductal carcinomas of the breast were obtained from 192 female patients with stage IIB and III prior to pre-operative neoadjuvant chemotherapy.

(progressive or stable disease, PD/SD)

(partial or complete remission, PR/CR)

The level of ALDH1 was tested by immunohistochemistry staining in paraffin-embedded tissue sections. Rabbit monoclonal ALDH1A1 antibody (**ab52492**, unpurified, Abcam) used at a 1:100 dilution.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



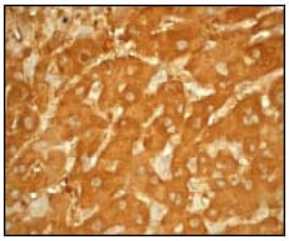
Flow Cytometry (Intracellular) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Overlay histogram showingHepG2 (Human liver hepatocellular carcinoma cell line) cells stained with **ab52492** (unpurified) (red line).

The cells were fixed with 80% methanol (5 minutes) and then permeabilized with 0.1% PBS-Tween for 20 minutes. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (**ab52492**, 1/1000 dilution) for 30 minutes at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (**ab150077**) at 1/2000 dilution for 30 minutes at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabeled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

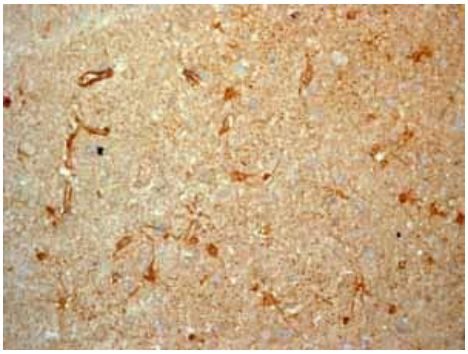
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Immunohistochemical analysis of paraffin-embedded human liver tissue sections labeling ALDH1A1 with **ab52492** (unpurified) at 1/100 dilution.

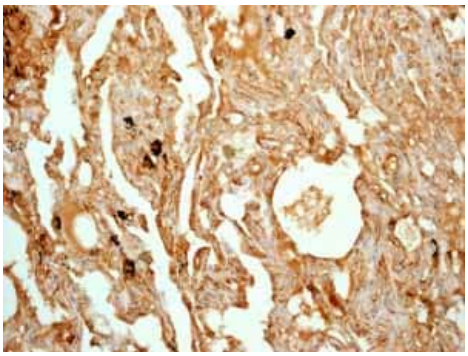
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Immunohistochemical analysis of Formalin/PFA-fixed paraffin-embedded normal human brain tissue sections labeling ALDH1A1 with **ab52492** (unpurified).

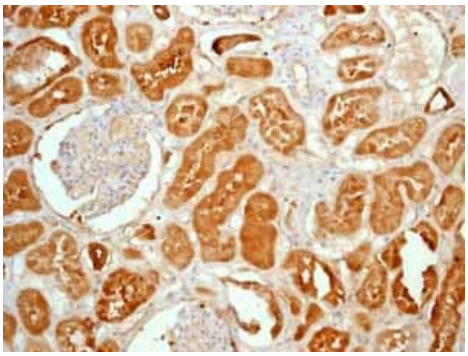
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Immunohistochemical analysis of Formalin/PFA-fixed paraffin-embedded normal human lung tissue sections labeling ALDH1A1 with **ab52492** (unpurified).

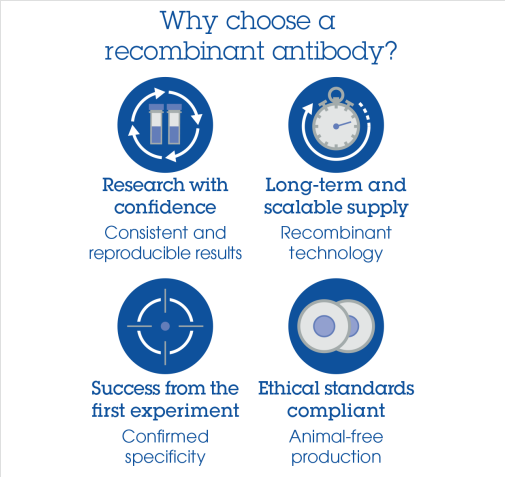
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

Immunohistochemical analysis of Formalin/PFA-fixed paraffin-embedded normal human kidney tissue sections labeling ALDH1A1 with **ab52492** (unpurified).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab52492**).



Anti-ALDH1A1 antibody [EP1933Y] - BSA and Azide free (ab215996)

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