

Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free ab236138

KO VALIDATED Recombinant RabMAB

10 Images

Overview

Product name	Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free
Description	Rabbit monoclonal [EPR14861] to Carbonic Anhydrase 12/CA12 - BSA and Azide free
Host species	Rabbit
Tested applications	Suitable for: Flow Cyt (Intra), IHC-P, WB
Species reactivity	Reacts with: Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	MCF7, SKOV3, 293, HeLa, A549, Human fetal kidney, Human ovary cancer and Human breast cancer lysates; Human renal adenocarcinoma, ovarian carcinoma, bladder transitional cell carcinoma, pancreas, colon and stomach tissues; SK-OV-3 cells.
General notes	<p>ab236138 is the carrier-free version of ab195233.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>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.</p> <p>This product is a recombinant monoclonal antibody, which offers several advantages including:</p> <ul style="list-style-type: none"> - High batch-to-batch consistency and reproducibility - Improved sensitivity and specificity - Long-term security of supply - Animal-free production <p>For more information see here.</p> <p>Our RabMAB[®] technology is a patented hybridoma-based technology for making rabbit</p>

monoclonal antibodies. For details on our patents, please refer to [RabMAb® patents](#).

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR14861
Isotype	IgG

Applications

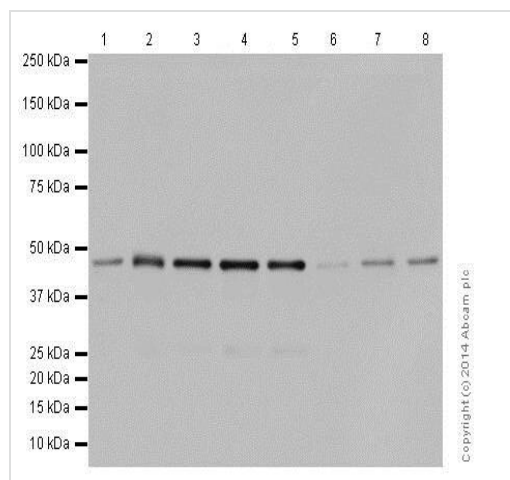
The Abpromise guarantee Our [Abpromise guarantee](#) covers the use of ab236138 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
Flow Cyt (Intra)		Use at an assay dependent concentration. ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.
IHC-P		Use at an assay dependent concentration. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Detects a band of approximately 45 kDa (predicted molecular weight: 39 kDa).

Target

Function	Reversible hydration of carbon dioxide.
Tissue specificity	Highly expressed in colon, kidney, prostate, intestine and activated lymphocytes. Expressed at much higher levels in the renal cell cancers than in surrounding normal kidney tissue. Moderately expressed in pancreas, ovary and testis.
Involvement in disease	Defects in CA12 are the cause of hyperchlorhidrosis isolated (HCHLH) [MIM:143860]. HCHLH is a disorder characterized by excessive sweating and increased sweat chloride levels. Affected individuals suffer from episodes of hyponatremic dehydration and report increased amounts of visible salt precipitates in sweat.
Sequence similarities	Belongs to the alpha-carbonic anhydrase family.
Cellular localization	Membrane.

Images



Western blot - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

All lanes : Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - C-terminal ([ab195233](#)) at 1/10000 dilution

Lane 1 : MCF7 cell lysate

Lanes 2 & 5 : SKOV3 cell lysate

Lane 3 : 293 cell lysate

Lane 4 : HeLa cell lysate

Lane 6 : Human fetal kidney lysate

Lane 7 : Human ovary cancer lysate

Lane 8 : Human breast cancer lysate

Lysates/proteins at 10 µg per lane.

Secondary

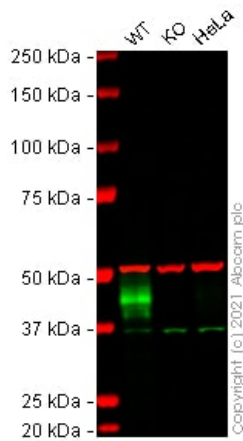
All lanes : Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugate at 1/1000 dilution

Developed using the ECL technique.

Predicted band size: 39 kDa

Exposure time: 10 seconds

This data was developed using the same antibody clone in a different buffer formulation ([ab195233](#))



Western blot - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

All lanes : Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - C-terminal (**ab195233**) at 1/10000 dilution

Lane 1 : Wild-type A549 (Human lung carcinoma cell line) whole cell lysate

Lane 2 : Ca12 knockout A549 (Human lung carcinoma cell line) whole cell lysate

Lane 3 : HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

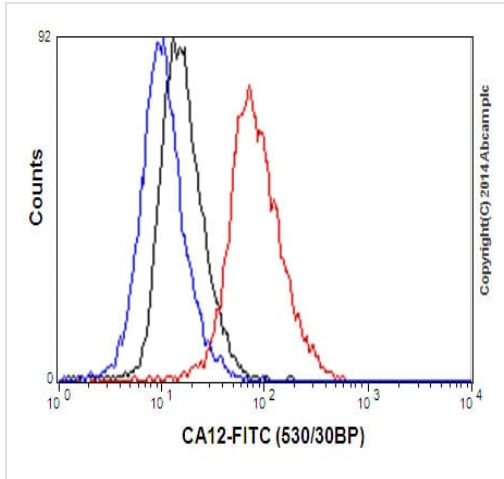
Predicted band size: 39 kDa

Observed band size: 40 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab195233**).

Lanes 1 - 3: Merged signal (red and green). Green - **ab195233** observed at 40 kDa. Red - loading control **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) observed at 55 kDa.

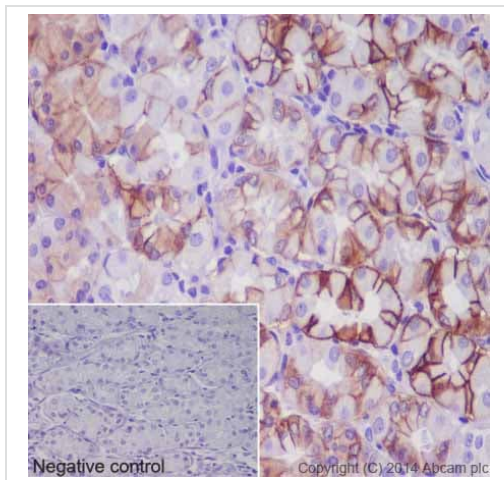
ab195233 was shown to react with Carbonic Anhydrase 12/CA12 in wild-type A549 cells in Western blot with loss of signal observed in Ca12 knockout cell line **ab273738** (knockout cell lysate **ab273778**). Wild-type A549 and Ca12 knockout cell lysates were subjected to SDS-PAGE. Membranes were blocked in 3 % milk in TBS-T (0.1 % Tween[®]) before incubation with **ab195233** and **ab7291** (Mouse anti-Alpha Tubulin [DM1A]) overnight at 4 °C at a 1 in 10000 dilution and a 1 in 20000 dilution respectively. Blots were incubated 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 in 20000 dilution for 1 h at room temperature before imaging.



Flow Cytometry (Intracellular) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Intracellular flow cytometric analysis of SK-OV-3 cells (paraformaldehyde-fixed, 2%) labeling CA12 with **ab195233** at 1/130 dilution (red) or a Rabbit monoclonal IgG (negative) (black), followed by Goat anti rabbit IgG (FITC) secondary at 1/150 dilution. Unlabeled cells (Blue).

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).



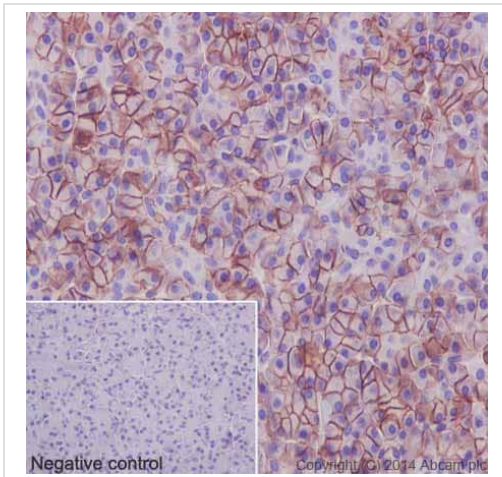
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded Human stomach tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and cytoplasm staining on human stomach tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



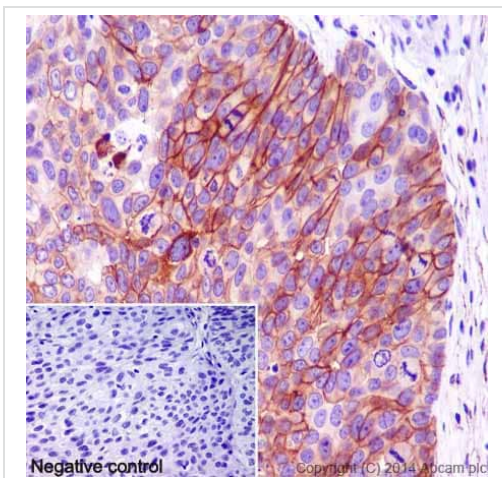
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded Human pancreas tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and weakly cytoplasm staining on human pancreas tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



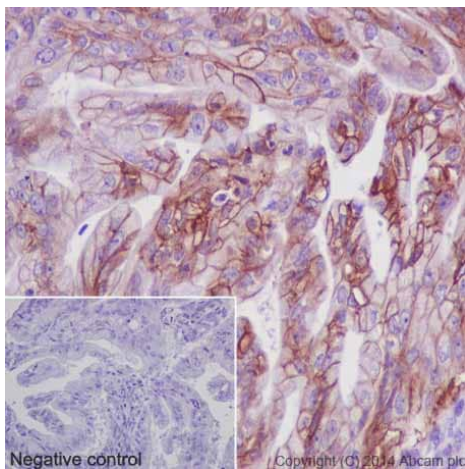
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded Human bladder transitional cell carcinoma tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and weakly cytoplasm staining on human transitional cell carcinoma of bladder tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



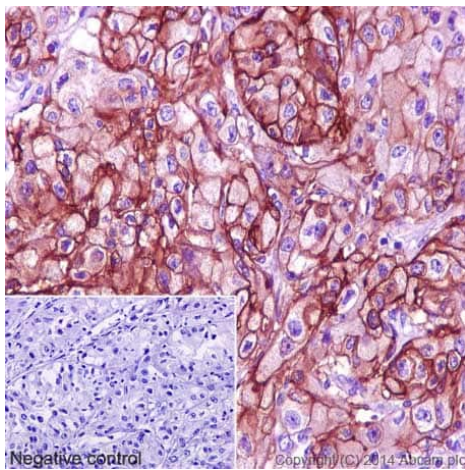
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded Human ovarian carcinoma tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and weakly cytoplasm staining on human ovarian carcinoma tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



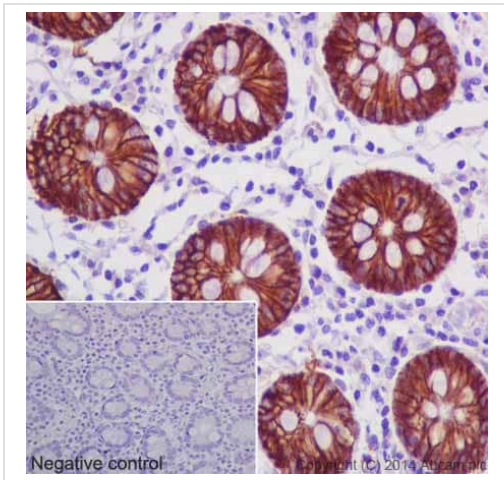
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded Human renal adenocarcinoma tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and cytoplasm staining on human renal adenocarcinoma tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Carbonic Anhydrase 12/CA12 antibody [EPR14861] - BSA and Azide free (ab236138)

Immunohistochemical analysis of paraffin-embedded human colon tissue labeling CA12 with **ab195233** at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution and counter-stained with Hematoxylin. (inset: negative control).

Note: Cell membrane and cytoplasm staining on human colon tissue was observed.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab195233**).

Heat mediated antigen retrieval was performed with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Why choose a recombinant antibody?

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

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