abcam

Product datasheet

Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free ab227111

KO VALIDATED Recombinant RabMAb

3 References 17 Images

Overview

Product name	Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free
Description	Rabbit monoclonal [EPR4058] to CD13 - Low endotoxin, Azide free
Host species	Rabbit
Tested applications	**Suitable for:** IHC-P, WB, ICC/IF **Unsuitable for:** Flow Cyt or IP
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: THP-1, PANC-1, Rat kidney, HAP1, HeLa and Mouse kidney lysates; IHC-P: human kidney, liver, hepatocellular carcinoma, prostatic carcinoma, astrocytoma and breast tissues, mouse and rat kidney tissues; ICC/IF: THP-1 cells
General notes	ab227111 is the carrier-free version of **ab108310**. 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**.

Our **Low endotoxin, azide-free formats** have low endotoxin level (≤ 1 EU/ml, determined by the LAL assay) and are free from azide, to achieve consistent experimental results in functional assays.

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	EPR4058
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab227111 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 with citrate buffer pH 6 before commencing with IHC staining protocol.
WB		Use at an assay dependent concentration. Predicted molecular weight: 110 kDa.
ICC/IF		Use at an assay dependent concentration.

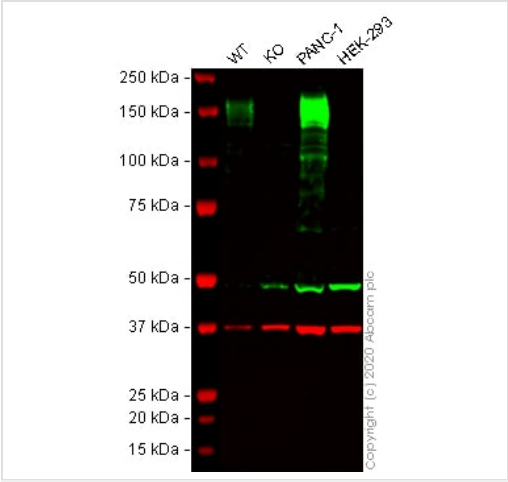
Application notes Is unsuitable for Flow Cyt or IP.

Target

Function Broad specificity aminopeptidase. Plays a role in the final digestion of peptides generated from hydrolysis of proteins by gastric and pancreatic proteases. May play a critical role in the pathogenesis of cholesterol gallstone disease. May be involved in the metabolism of regulatory peptides of diverse cell types including small intestinal and tubular epithelial cells, macrophages, granulocytes and synaptic membranes from the CNS. Found to cleave antigen peptides bound to major histocompatibility complex class II molecules of presenting cells and to degrade neurotransmitters at synaptic junctions. Is also implicated as a regulator of IL-8 bioavailability in the endometrium, and therefore may contribute to the regulation of angiogenesis. Is used as a marker for acute myeloid leukemia and plays a role in tumor invasion. In case of human

	coronavirus 229E (HCoV-229E) infection, serves as receptor for HCoV-229E spike glycoprotein. Mediates as well human cytomegalovirus (HCMV) infection.
Tissue specificity	Expressed in epithelial cells of the kidney, intestine, and respiratory tract; granulocytes, monocytes, fibroblasts, endothelial cells, cerebral pericytes at the blood-brain barrier, synaptic membranes of cells in the CNS. Also expressed in endometrial stromal cells, but not in the endometrial glandular cells. Found in the vasculature of tissues that undergo angiogenesis and in malignant gliomas and lymph node metastases from multiple tumor types but not in blood vessels of normal tissues. A soluble form has been found in plasma. It is found to be elevated in plasma and effusions of cancer patients.
Sequence similarities	Belongs to the peptidase M1 family.
Domain	Amino acids 260-353 are essential to mediate susceptibility to infection with HCoV-229E (in porcine/human chimeric studies) and more specifically amino acids 288-295 (mutagenesis studies).
Post-translational modifications	Sulfated. N- and O-glycosylated. May undergo proteolysis and give rise to a soluble form.
Cellular localization	Cell membrane. Cytoplasm > cytosol. A soluble form has also been detected.

Images



Western blot - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

All lanes : Anti-CD13 antibody [EPR4058] (**ab108310**) at 1/1000 dilution

Lane 1 : Wild-type THP-1 cell lysate
Lane 2 : ANPEP knockout THP-1 cell lysate
Lane 3 : PANC-1 cell lysate
Lane 4 : HEK-293 cell lysate

Lysates/proteins at 30 µg per lane.

Performed under reducing conditions.

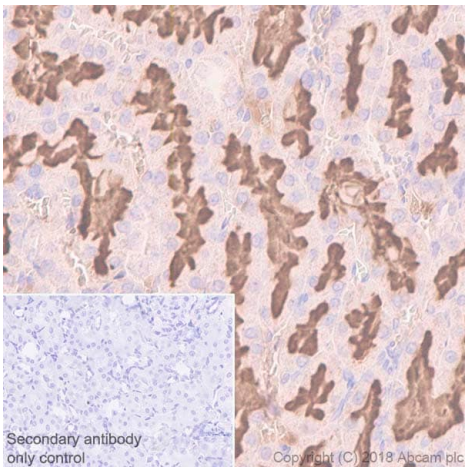
Predicted band size: 110 kDa
Observed band size: 160 kDa

This data was developed using the same antibody clone in a different buffer formulation (**ab108310**).

Lanes 1 - 4: Merged signal (red and green). Green - **ab108310** observed at 160 kDa. Red - loading control **ab8245** (Mouse anti-GAPDH antibody [6C5]) observed at 37kDa.

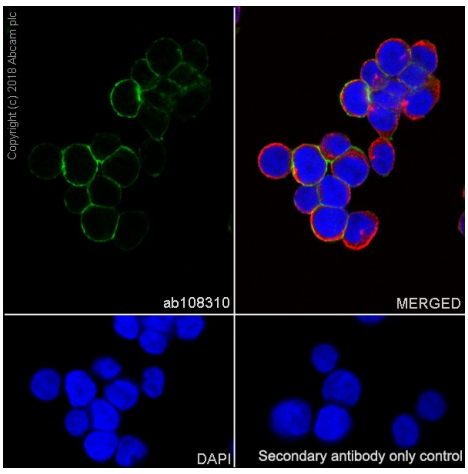
ab108310 was shown to react with CD13 in wild-type THP-1 cells in western blot with loss of signal observed in ANPEP knockout cell

line **ab273759** (knockout cell lysate **ab275505**). Wild-type and ANPEP knockout THP-1 cell lysates were subjected to SDS-PAGE. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with **ab108310** and **ab8245** (Mouse anti-GAPDH antibody [6C5]) overnight at 4°C at a 1 in 1000 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 hour at room temperature before imaging.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue sections labeling CD13 with purified **ab108310** at 1/1600 dilution (0.43 µg/ml). Heat mediated antigen retrieval was performed 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 (**ab108310**)

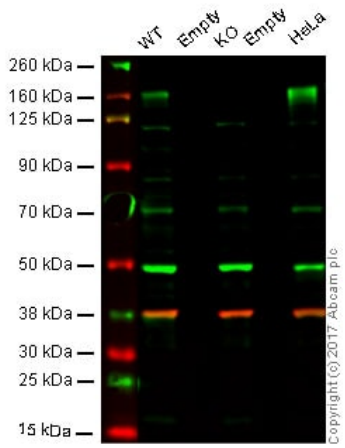


Immunocytochemistry/ Immunofluorescence - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

Confocal image showing membranous staining in THP-1 cells

ab108310 (purified) at 1/100 staining CD13 in the THP-1 (human monocytic leukemia monocyte) cell line by ICC/IF (Immunocytochemistry/immunofluorescence). Cells were fixed with 100% methanol. Samples were incubated with primary antibody 1/500. **ab150077** An Alexa Fluor® 488-conjugated Goat anti-Rabbit IgG at 1/1000 was used as the secondary antibody. Ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) 1/200 was used as a counter stain and DAPI was used as a nuclear counter stain.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).



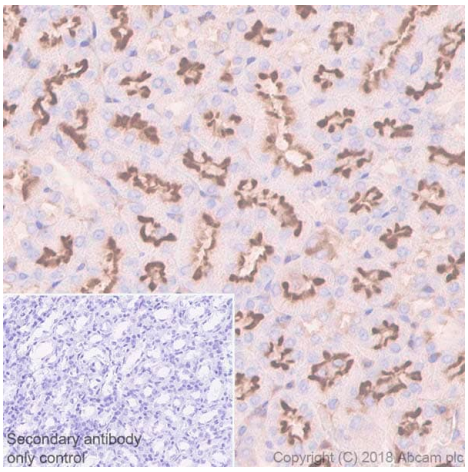
Western blot - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

This WB data was generated using the same anti-CD13 antibody clone, EPR4058, in a different buffer formulation (cat# **ab108310**).

Lane 1: Wild type HAP1 whole cell lysate (20 µg)
Lane 2: Empty
Lane 3: CD13 (KO) whole cell lysate (20 µg)
Lane 4: Empty
Lane 5: HeLa whole cell lysate (20 µg)

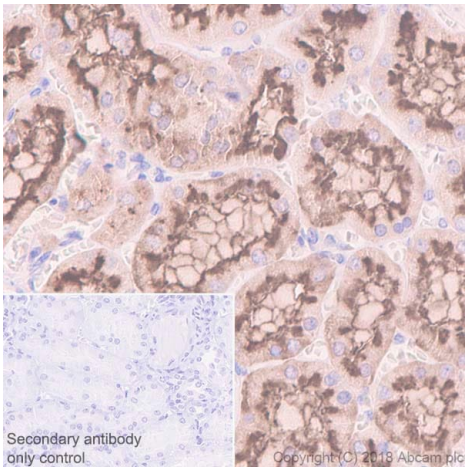
Lanes 1 - 5: Merged signal (red and green). Green - **ab108310** observed at 160 kDa. Red - loading control, **ab18058**, observed at 130 kDa.

ab108310 was shown to recognize CD13 when CD13 knockout samples were used, along with additional cross-reactive bands. Wild-type and CD13 knockout samples were subjected to SDS-PAGE. Ab108310 and **ab18058** (Mouse anti Vinculin loading control) were incubated overnight at 4°C at 1/1000 dilution and 1/10000 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 1/10000 dilution for 1 hour at room temperature before imaging.



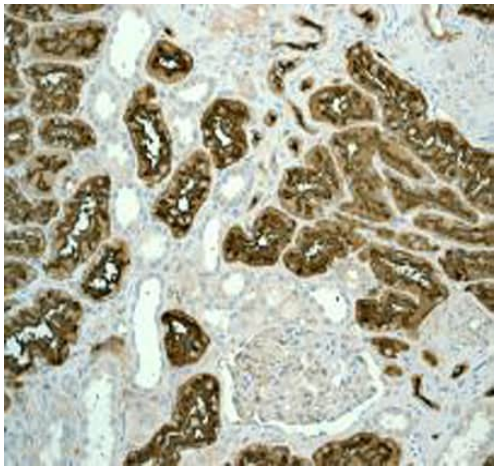
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue sections labeling CD13 with purified **ab108310** at 1/1600 dilution (0.43 µg/ml). Heat mediated antigen retrieval was performed 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 (**ab108310**)



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue sections labeling CD13 with purified **ab108310** at 1/1600 dilution (0.43 µg/ml). Heat mediated antigen retrieval was performed 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 (**ab108310**)

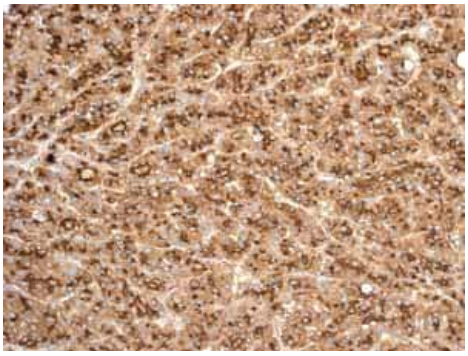


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 (unpurified), at 1/250, staining CD13 in human kidney tissue by immunohistochemistry.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

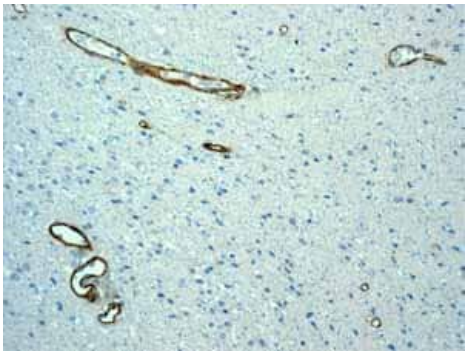


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 (unpurified) showing positive staining in Hepatocellular carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

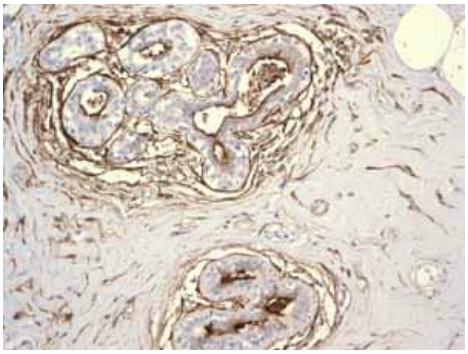


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Astrocytoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

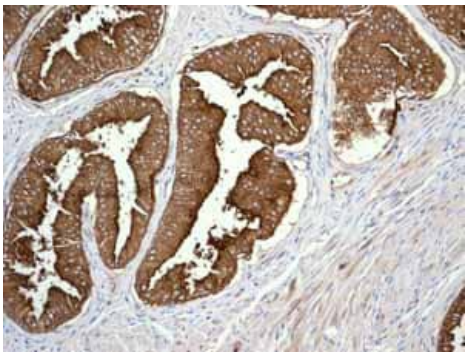


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Normal breast tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

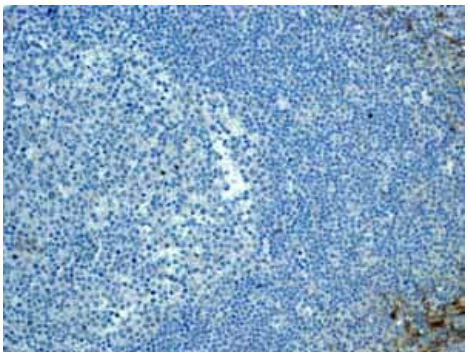


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Prostatic carcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

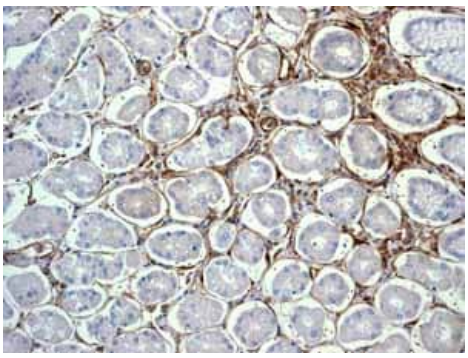


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Normal tonsil tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

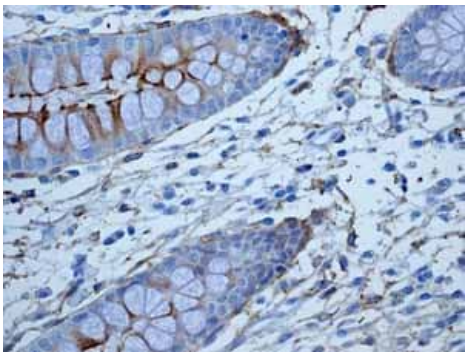


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Normal stomach tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

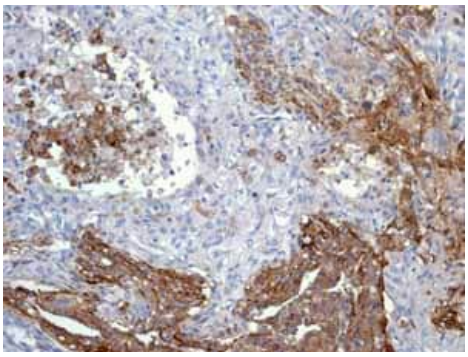


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Normal colon tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

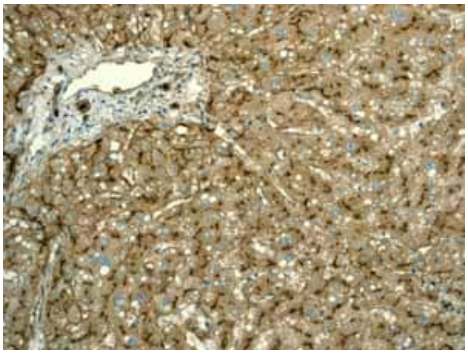


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

ab108310 showing positive staining in Lung adenocarcinoma tissue.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (**ab108310**).

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.

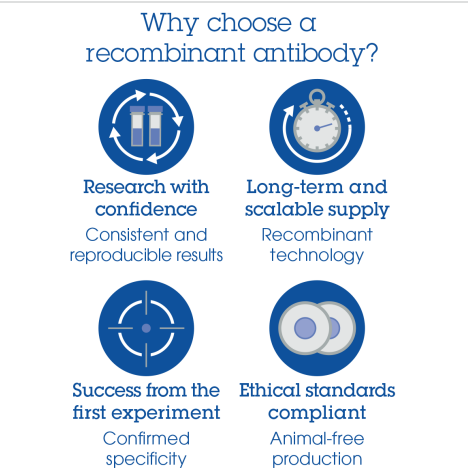


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

This IHC data was generated using the same anti-CD13 antibody clone, EPR4058, in a different buffer formulation (cat# **ab108310**).

ab108310 showing positive staining in Normal liver tissue.

Heat mediated antigen retrieval was performed with citrate buffer pH 6 before commencing with IHC staining protocol.



Anti-CD13 antibody [EPR4058] - Low endotoxin, Azide free (ab227111)

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