abcam

ab314134

Anti-Claudin 6 antibody [EPR28103-113]

Anti-Claudin 6 antibody [EPR28103-113] (ab314134) is a rabbit monoclonal antibody detecting Claudin 6 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human** samples.

Enhanced IHC validation data - Download the data
- cross-reactivity testing for confirmed specificity - CLDN3/4/5/6/9
- detailed IHC expression profiling in normal and clinically relevant cancer FFPE TMAs- ovarian, testicular and lung
- protocols for BOND RX™ and Ventana DISCOVERY ULTRA

Biophysical QC for unrivalled batch-batch consistency

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR28103-113
Purification technique	Affinity purification Protein A
Concentration	0.511 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Transfected cell lysate - Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Transfected cell line
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/100 - 1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Transfected cell line
Dilution info	1/100 - 1/5000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Not recommended

Species	Transfected cell lysate - Human, Transfected cell line

Dilution info	-
Notes	-

Target data

See full target information CLDN6

Function	Plays a major role in tight junction-specific obliteration of the intercellular space. (Microbial infection) Acts as a receptor for hepatitis C virus (HCV) entry into hepatic cells.

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Notes

What is this antibody validated in?
Anti-Claudin 6 antibody [EPR28103-113] (ab314134) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

What is the molecular weight of Claudin 6?
Anti-Claudin 6 [EPR28103-113] (ab314134) specifically detects a band for Claudin 6 (UniProt: P56747) at a molecular weight of 23kDa.

Other related products
We have a range of other formats of antibody clone [EPR28103-113] also available for your convenience: ab314134, Carrier free - ab314135, PE - ab318407, APC - ab318510, Alexa Fluor® 488 - ab318613, Alexa Fluor® 647 - ab318716, Alexa Fluor® 594 - ab318819, Alexa Fluor® 555 - ab318919, Alexa Fluor® 750 - ab321557

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
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 batch production

For more information, read more on recombinant antibodies.

Trial sizes available!
Test your antibody or perform pre-screening before committing to a larger quantity. Sold in 20µl. Discover our selection of trial-size antibodies.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Claudin 6 also known as CLDN6 is a transmembrane protein belonging to the claudin family. This family is critical in forming tight junctions between cells which regulate the paracellular barrier functions of epithelia. The molecular mass of claudin 6 is approximately 23 kDa. Researchers have observed its expression mainly in embryonic tissues and certain cancer types. In normal adult tissues it shows limited expression indicating a specific role during early developmental stages.
Biological function summary	Claudin 6 participates in the formation and maintenance of tight junctions in epithelial cells. It is part of a larger complex that includes multiple claudins and other tight junction proteins like occludin and zonula occludens-1. This complex maintains cellular polarity and controls the flow of ions and molecules between cells which is essential for tissue homeostasis. Its expression pattern suggests a role in cell differentiation and proliferation during embryogenesis and tumorigenesis.
Pathways	Various studies indicate that claudin 6 is involved in the Wnt signaling pathway which is key in embryonic development and cell differentiation. This pathway interacts with several other proteins including B-catenin to mediate gene expression and cellular functions. Additionally claudin 6 contributes to pathways influencing the epithelial-mesenchymal transition (EMT) a process necessary for organ development and cancer metastasis. Through these pathways claudin 6 interacts with diverse proteins to modulate cell behavior.
Associated diseases and disorders	Researchers have linked claudin 6 to certain cancers particularly ovarian and breast cancer. Its aberrant expression may contribute to tumor progression and invasiveness. Claudin 6 can promote changes in the tumor microenvironment by interacting with other cell junction proteins possibly influencing cancer cell proliferation and spread. Furthermore its altered expression is noted in immune disorders suggesting potential roles in pathogenesis through interactions with immune cells or signaling molecules like cytokines within the immune pathways.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

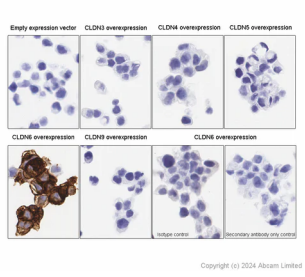
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

12 product images

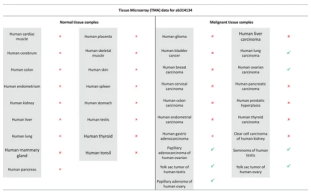


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunohistochemical analysis of formalin-fixed paraffin-embedded 293T (human embryonic kidney epithelial cells) labelling CLDN6 with ab314134 at a concentration of 0.1 µg/ml in cells transfected with over expression vectors containing a His tag.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument with a Bond™ Polymer Refine Detection kit. Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution 2) for 20 mins.

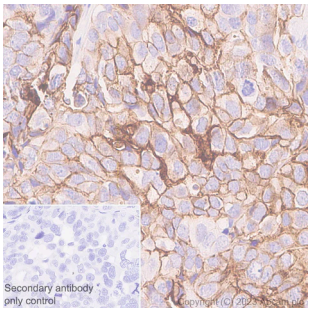
ab314134 anti-CLDN6 antibody [EPR28103-113] was incubated for 15 mins at room temperature. Cells transfected with an empty vector showed no staining. Absence of staining was observed when stained using anti-rabbit IgG isotype control (ab172730) or secondary antibody only control. Sections were counterstained with Hematoxylin.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

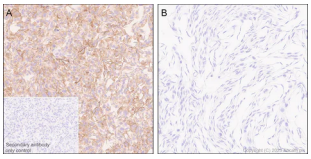
Claudin 6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Claudin 6 antibody

Immunohistochemical analysis of paraffin-embedded Tissue Microarray (T tissue labeling Claudin 6 with ab314134 at 1/100 (5.16 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Table of the human normal TMA tissue and human tumor tissue TMA depending on the staining. The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection).



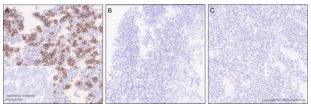
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunohistochemical analysis of paraffin-embedded human ovarian adenocarcinoma tissue labeling Claudin 6 with ab314134 at 1/100 (5.16 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human ovarian adenocarcinoma. The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



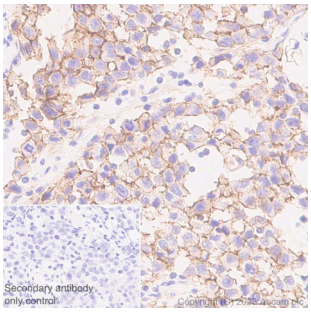
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunohistochemical analysis of paraffin-embedded (A) NIH OVCAR-3 (hum tissue labeling Claudin 6 with ab314134 at 1/1000 (0.516 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) NIH:OVCAR-3 cell pellet; no staining on (B) DU 145 cell pellet. The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



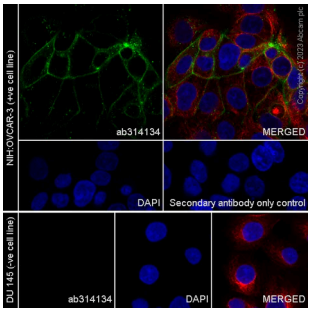
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunohistochemical analysis of paraffin-embedded (A) HEK-293T (human tissue labeling Claudin 6 with ab314134 at 1/5000 (0.103 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on (A) HEK-293T transfected with a His-tagged Claudin-6 (CLDN6) cell pellet; no staining on (B) HEK-293T transfected with a His-tagged Claudin-9 (CLDN9) construct cell pellet and (C) HEK-293T transfected with a His-tagged empty vector cell pellet. The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



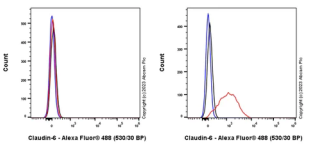
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunohistochemical analysis of paraffin-embedded human testis seminoma tissue labeling Claudin 6 with ab314134 at 1/100 (5.16 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Positive staining on human testis seminoma (PMID: 22803571). The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



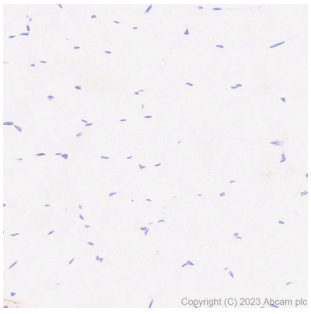
Immunocytochemistry/ Immunofluorescence - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) cells labelling Claudin 6 with ab314134 at 1/50 (10.32 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2ug/ml dilution (Green). Confocal image showing membranous staining in NIH:OVCAR-3 cells. Negative control: DU 145. Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2ug/ml dilution.



Flow Cytometry (Intracellular) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

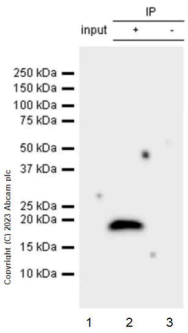
Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized DU 145 (human prostate carcinoma epithelial cell, Left) / NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell, Right) cells labelling Claudin 6 with ab314134 at 1/50 dilution (1 ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Negative control: DU 145.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Claudin 6 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human skeletal muscle using rabbit Anti-Claudin 6 antibody

Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissue labeling Claudin 6 with ab314134 at 1/100 (5.16 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Negative control: No staining on human skeletal muscle (PMID: 31896660). The section was incubated with ab314134 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunoprecipitation - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

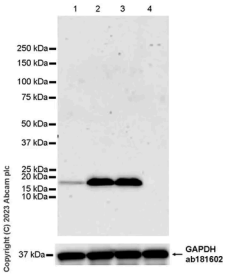
Claudin 6 was immunoprecipitated from 0.35 mg NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) whole cell lysate with ab314134 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab314134 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution. Lane 1: NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) whole cell lysate Lane 2: NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) whole cell lysate Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab314134 in NIH:OVCAR-3 whole cell lysate Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 15 seconds
All lanes:
Immunoprecipitation - Anti-Claudin 6 antibody [EPR28103-113] (ab314134) at 1/30 dilution

All lanes:
NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 15s



Western blot - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Blocking and diluting buffer and concentration: 5% NFDM/TBST Negative control: DU 145 Samples are non-boiled as boiling may cause protein aggregation. In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution. Exposure time: 180 seconds
All lanes:
Western blot - Anti-Claudin 6 antibody [EPR28103-113] (ab314134) at 1/1000 dilution

Lane 1:
NIH:OVCAR-3 (human ovary adenocarcinoma epithelial cell) whole cell lysate at 20 µg

Lane 2:
JEG-3 (human placenta epithelial cell) whole cell lysate at 20 µg

Lane 3:
JAR (human placenta choriocarcinoma epithelial cell) whole cell lysate at 20 µg

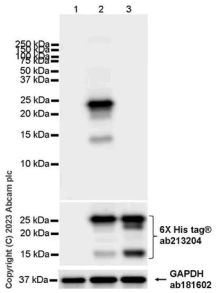
Lane 4:
DU 145 (human prostate carcinoma epithelial cell) whole cell lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 23 kDa

Exposure time: 180s



Western blot - Anti-Claudin 6 antibody [EPR28103-113] (ab314134)

Blocking and diluting buffer and concentration: 5% NFDM/TBST This antibody does not cross-react with human CLDN9. Samples are non-boiled as boiling may cause protein aggregation. In Western blot, Anti-GAPDH antibody [EPR16891] - Loading Control (ab181602) staining at 1/200000 dilution. In Western blot, Anti-6X His tag® antibody [EPR20547] - ChIP Grade (ab213204) staining at 1/5000 dilution Exposure time: 3 seconds
All lanes:
Western blot - Anti-Claudin 6 antibody [EPR28103-113] (ab314134) at 1/1000 dilution

Lane 1:
293T cells transfected with an empty vector containing a His tag whole cell lysate at 10 µg

Lane 2:
293T cells transfected with a human CLDN6 expression vector containing a His-tag whole cell lysate at 10 µg

Lane 3:
293T cells transfected with a human CLDN9 expression vector containing a His-tag whole cell lysate at 10 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Observed band size: 23 kDa

Exposure time: 3s

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.