abcam

Product datasheet

Anti-Claudin 3 antibody [EPR19971] ab214487

Recombinant RabMAb

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Overview

Product name	Anti-Claudin 3 antibody [EPR19971]
Description	Rabbit monoclonal [EPR19971] to Claudin 3
Host species	Rabbit
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, IP, Flow Cyt (Intra)
Species reactivity	**Reacts with:** Human
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: SW480, MCF7 and Caco-2 whole cell lysates; human breast cancer, pancreas, ovary cancer and fetal kidney lysates. IHC-P: Human pancreas, prostate and breast cancer tissues. ICC/IF: MCF7 cells. Flow Cyt (intra): MCF7 cells. IP: MCF7 whole cell lysate.
General notes	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**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.2 Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol, 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR19971

Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab214487 in the following tested applications.

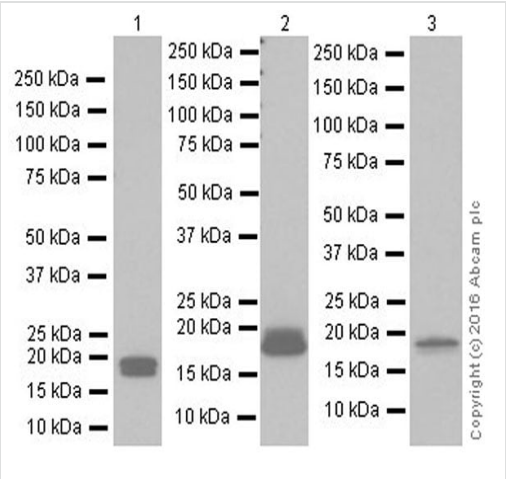
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★☆☆☆☆ (1)	1/1000. Detects a band of approximately 20 kDa (predicted molecular weight: 23 kDa).
IHC-P	★★★★★ (2)	1/250. Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.
ICC/IF		1/100.
IP		1/30.
Flow Cyt (Intra)		1/50. **ab172730** - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Target

Function	Plays a major role in tight junction-specific obliteration of the intercellular space, through calcium-independent cell-adhesion activity.
Involvement in disease	Note=CLDN3 is located in the Williams-Beuren syndrome (WBS) critical region. WBS results from a hemizygous deletion of several genes on chromosome 7q11.23, thought to arise as a consequence of unequal crossing over between highly homologous low-copy repeat sequences flanking the deleted region.
Sequence similarities	Belongs to the claudin family.
Cellular localization	Cell junction > tight junction. Cell membrane.

Images



Western blot - Anti-Claudin 3 antibody [EPR19971] (ab214487)

All lanes : Anti-Claudin 3 antibody [EPR19971] (ab214487) at 1/1000 dilution

Lane 1 : SW480 (Human colorectal adenocarcinoma cell line) whole cell lysate
Lane 2 : MCF7 (Human breast adenocarcinoma cell line) whole cell lysate
Lane 3 : Caco-2 (Human colorectal adenocarcinoma cell line) whole cell lysate

Lysates/proteins at 10 µg per lane.

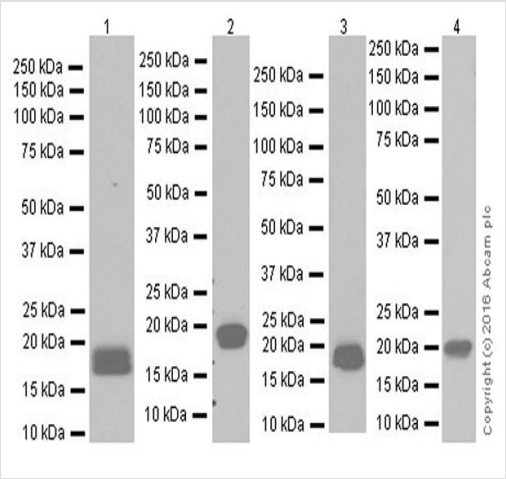
Secondary
All lanes : Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/100000 dilution

Predicted band size: 23 kDa
Observed band size: 20 kDa

Exposure time: 1 second

Blocking/Dilution buffer: 5% NFDM/TBST.

Doublet bands observed correspond to full length and processed forms of the claudin-3 protein. This is consistent with what has been described in the literature (PMID: 26170992).



Western blot - Anti-Claudin 3 antibody [EPR19971] (ab214487)

All lanes : Anti-Claudin 3 antibody [EPR19971] (ab214487) at 1/1000 dilution

Lane 1 : Human breast cancer lysate
Lane 2 : Human pancreas lysate
Lane 3 : Human ovary cancer lysate
Lane 4 : Human fetal kidney lysate

Lysates/proteins at 10 µg per lane.

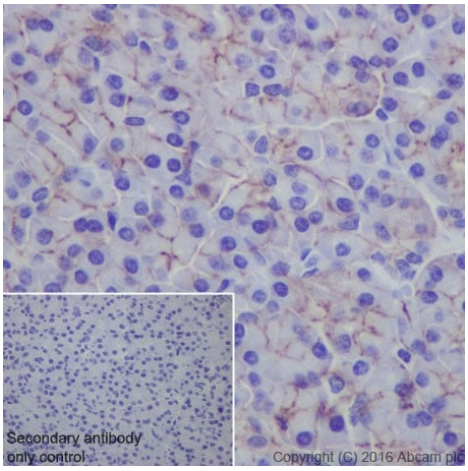
Secondary
All lanes : Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/5000 dilution

Predicted band size: 23 kDa
Observed band size: 20 kDa

Blocking/Dilution buffer: 5% NFDM/TBST.

Exposure time: Lane 1/2: 1 minute; Lane 3: 3 seconds; Lane 4: 3 minutes.

Doublet bands observed correspond to full length and processed forms of the claudin-3 protein. This is consistent with what has been described in the literature (PMID: 26170992).

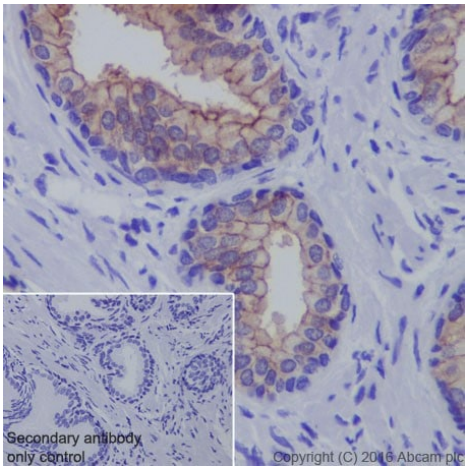


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 3 antibody [EPR19971] (ab214487)

Immunohistochemical analysis of paraffin-embedded human pancreas tissue labeling Claudin 3 with ab214487 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Membrane staining on the pancreatic acinar cells of human pancreas is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

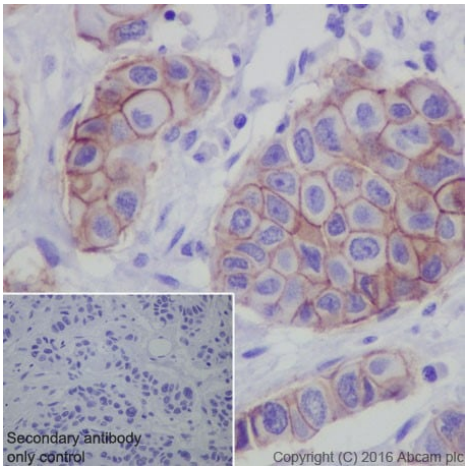


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 3 antibody [EPR19971] (ab214487)

Immunohistochemical analysis of paraffin-embedded human prostate tissue labeling Claudin 3 with ab214487 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Membrane staining on the epithelium of human benign prostatic hyperplasia is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

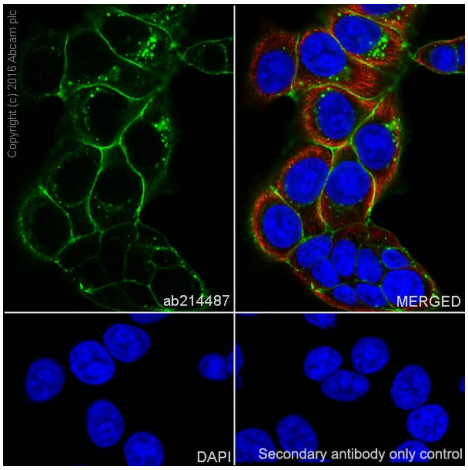


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Claudin 3 antibody [EPR19971] (ab214487)

Immunohistochemical analysis of paraffin-embedded human breast cancer tissue labeling Claudin 3 with ab214487 at 1/250 dilution, followed by Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution. Membrane staining on the tumor cells of human breast cancer is observed. Counter stained with Hematoxylin.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (HRP) (**ab97051**) at 1/500 dilution.

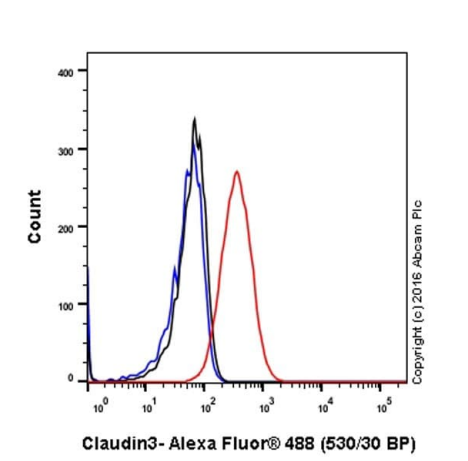
Perform heat mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-Claudin 3 antibody [EPR19971] (ab214487)

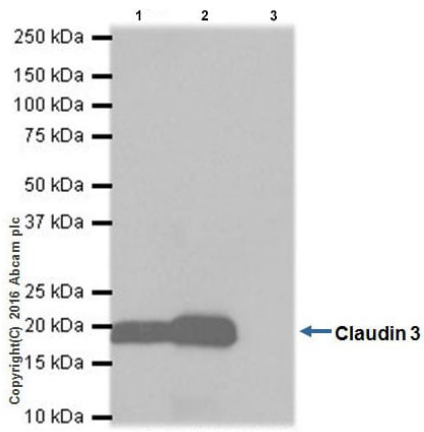
Immunofluorescent analysis of 100% methanol-fixed MCF7 (Human breast adenocarcinoma cell line) cells labeling Claudin 3 with ab214487 at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) secondary antibody at 1/1000 dilution (green). Confocal image showing membrane staining on MCF7 cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) **ab195889**) at 1/200 dilution (red).

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (**ab150077**) at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Claudin 3 antibody [EPR19971] (ab214487)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed MCF7 (Human breast adenocarcinoma cell line) cells labeling Claudin 3with ab214487 at 1/50 dilution (red) compared withRabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**; black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody; blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Claudin 3 antibody [EPR19971] (ab214487)

Claudin 3 was immunoprecipitated from 0.35 mg of MCF7 (Human breast adenocarcinoma cell line) whole cell lysate with ab214487 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab214487 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (**ab131366**), was used for detection at 1/10,000 dilution

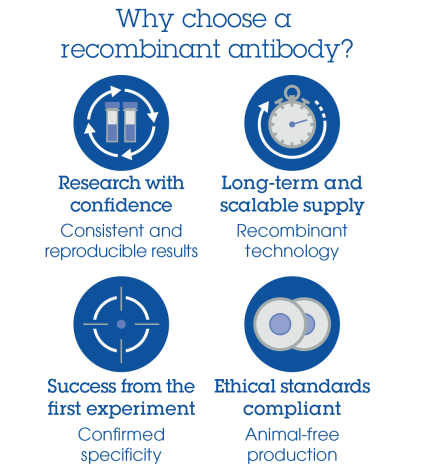
Lane 1: MCF7 whole cell lysate 10µg (Input).

Lane 2: ab214487 IP in MCF7 whole cell lysate.

Lane 3:Rabbit IgG, monoclonal [EPR25A] - Isotype Control (**ab172730**) instead of ab214487 in MCF7 whole cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 seconds.



Anti-Claudin 3 antibody [EPR19971] (ab214487)

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