


Product datasheet

Anti-Claudin 1 antibody [EPR9306] ab180158

KO VALIDATED Recombinant RabMAb[®]

★★★★☆ **2 Abreviews** **23 References** **5 Images**

Overview

Product name	Anti-Claudin 1 antibody [EPR9306]
Description	Rabbit monoclonal [EPR9306] to Claudin 1
Host species	Rabbit
Specificity	Claudin-1 expression is minimal in normal colon tissues and is increased in tumors (PMID: 17308096, PMID: 15965503).
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Mouse, Human Predicted to work with: Rat 
Immunogen	Synthetic peptide. This information is proprietary to Abcam and/or its suppliers.
Positive control	WB: A431, Human skin and fetal liver lysates, Mouse kidney and liver tissue lysates.
General notes	This product is a recombinant monoclonal antibody, which offers several advantages including: <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 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	Preservative: 0.01% Sodium azide Constituents: 59% PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Purity	Protein A purified
Clonality	Monoclonal
Clone number	EPR9306

Isotype

IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab180158 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)	1/2000 - 1/10000. Detects a band of approximately 19 kDa (predicted molecular weight: 23 kDa).

Target

Function

Claudins function as major constituents of the tight junction complexes that regulate the permeability of epithelia. While some claudin family members play essential roles in the formation of impermeable barriers, others mediate the permeability to ions and small molecules. Often, several claudin family members are coexpressed and interact with each other, and this determines the overall permeability. CLDN1 is required to prevent the paracellular diffusion of small molecules through tight junctions in the epidermis and is required for the normal barrier function of the skin. Required for normal water homeostasis and to prevent excessive water loss through the skin, probably via an indirect effect on the expression levels of other proteins, since CLDN1 itself seems to be dispensable for water barrier formation in keratinocyte tight junctions (PubMed:23407391).

(Microbial infection) Acts as a receptor for hepatitis C virus in hepatocytes (PubMed:17325668). Acts as a receptor for dengue virus (PubMed:24074594).

Tissue specificity

Strongly expressed in liver and kidney. Expressed in heart, brain, spleen, lung and testis.

Involvement in disease

Ichthyosis-sclerosing cholangitis neonatal syndrome

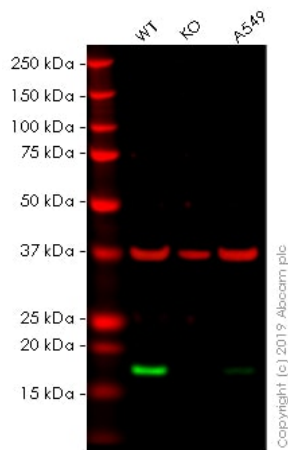
Sequence similarities

Belongs to the claudin family.

Cellular localization

Cell junction, tight junction. Cell membrane.

Images



Western blot - Anti-Claudin 1 antibody [EPR9306] (ab180158)

All lanes : Anti-Claudin 1 antibody [EPR9306] (ab180158) at 1/10000 dilution

Lane 1 : Wild-type A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 2 : CLDN1 knockout A-431 (Human epidermoid carcinoma cell line) whole cell lysate

Lane 3 : A549 (Human lung carcinoma cell line) whole cell lysate

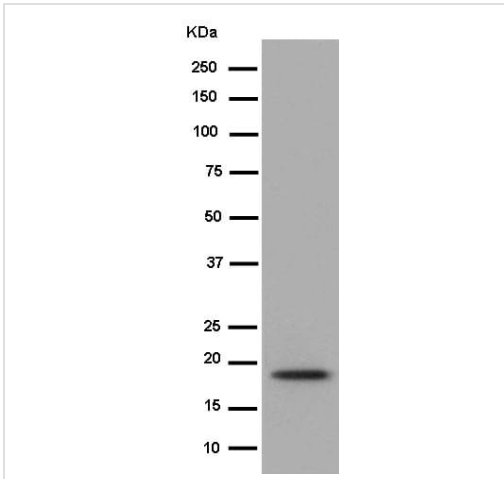
Lysates/proteins at 20 µg per lane.

Performed under reducing conditions.

Predicted band size: 23 kDa

Lanes 1 - 3: Merged signal (red and green). Green - ab180158 observed at 18 kDa. Red - loading control, **ab8245**, observed at 37 kDa.

ab180158 was shown to specifically react with in wild-type A431 WT cells as signal was lost in A431 CLDN1 knockout cells. Wild-type and A431 CLDN1 knockout samples were subjected to SDS-PAGE. The membrane was blocked with 3pc Milk. Ab180158 and **ab8245** (Mouse anti GAPDH loading control) were incubated overnight at 4°C at 1/10000 dilution and 1/20000 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 1/20000 dilution for 1 hour at room temperature before imaging.



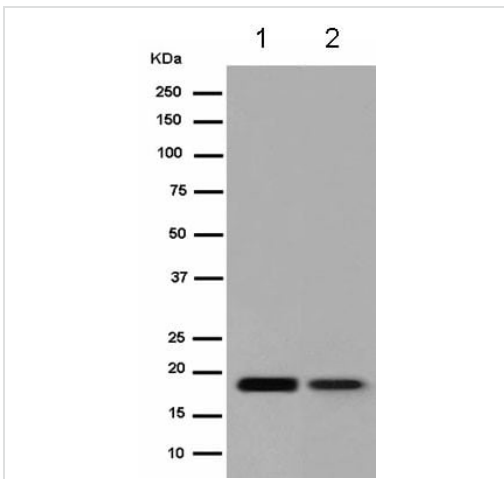
Western blot - Anti-Claudin 1 antibody [EPR9306] (ab180158)

Anti-Claudin 1 antibody [EPR9306] (ab180158) at 1/2000 dilution + Human fetal liver lysate at 10 µg

Secondary

Goat Anti-Rabbit IgG H&L (HRP) ([ab136636](#)) at 1/500 dilution

Predicted band size: 23 kDa



Western blot - Anti-Claudin 1 antibody [EPR9306] (ab180158)

All lanes : Anti-Claudin 1 antibody [EPR9306] (ab180158) at 1/10000 dilution

Lane 1 : A431 cell lysate

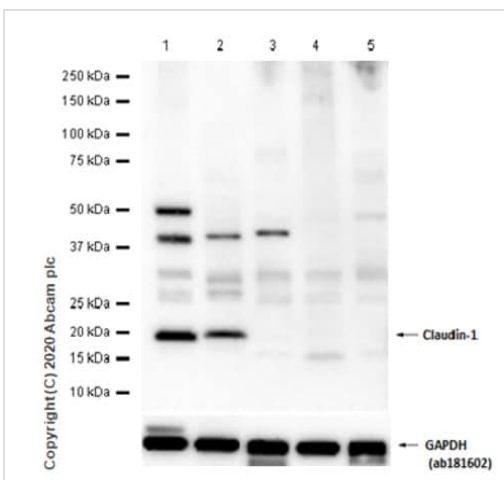
Lane 2 : Human skin lysate

Lysates/proteins at 20 µg per lane.

Secondary

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

Predicted band size: 23 kDa



Western blot - Anti-Claudin 1 antibody [EPR9306] (ab180158)

All lanes : Anti-Claudin 1 antibody [EPR9306] (ab180158) at 1/1000 dilution

Lane 1 : Mouse liver tissue lysate

Lane 2 : Mouse kidney tissue lysate

Lane 3 : Mouse colon tissue lysate

Lane 4 : Mouse small intestine tissue lysate

Lane 5 : NIH/3T3 (Mouse embryonic fibroblast) whole cell lysate

Lysates/proteins at 20 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/20000 dilution

Predicted band size: 23 kDa

Observed band size: 18 kDa

Exposure time: 60 seconds

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

Claudin-1 expression is minimal in normal colon tissues and is increased in tumors (PMID: 17308096, PMID: 15965503).

Why choose a recombinant antibody?

Research with confidence
Consistent and reproducible results

Long-term and scalable supply
Recombinant technology

Success from the first experiment
Confirmed specificity

Ethical standards compliant
Animal-free production

Anti-Claudin 1 antibody [EPR9306] (ab180158)

Please note: All products are "FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC PROCEDURES"

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours
- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit <https://www.abcam.com/abpromise> or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors