**Product datasheet**

**Anti-Claudin 1 antibody ab15098**

**Product name**  
Anti-Claudin 1 antibody

**Description**  
Rabbit polyclonal to Claudin 1

**Host species**  
Rabbit

**Tested applications**  
Suitable for: IHC-Fr, ICC/IF, WB, IP, IHC-FoFr, IHC-P

**Species reactivity**  
Reacts with: Mouse, Rat, Human

**Predicted to work with:** Dog, Monkey

**Immunogen**  
Synthetic peptide within Human Claudin 1 aa 150 to the C-terminus (C terminal). The exact sequence is proprietary.

**Database link:** O95832

**Positive control**  
Tested with skin and breast carcinoma.

**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 or -80°C. Avoid freeze / thaw cycle.

**Storage buffer**  
pH: 7.6
Preservative: 0.1% Sodium azide
Constituents: PBS, 1% BSA

**Purity**  
Immunogen affinity purified

**Clonality**  
Polyclonal

**Isotype**  
IgG

**Applications**

Our Abpromise guarantee covers the use of ab15098 in the following tested applications.

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

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<th>Abreviews</th>
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<td>IHC-Fr</td>
<td>★★★★☆</td>
<td>Use at an assay dependent concentration.</td>
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### 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).


### 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

### Images
Western blot - Anti-Claudin 1 antibody (ab15098) at 1/25 dilution + HeLa cell lysate

**Predicted band size:** 23 kDa

**Observed band size:** 19 kDa

why is the actual band size different from the predicted?

ab15098 (1µg/ml) staining Claudin 1 in human skin using an automated system (DAKO Autostainer Plus). Using this protocol there is strong staining of the cell membrane.

Sections were rehydrated and antigen retrieved with the Dako 3 in 1 AR buffer EDTA pH 9.0 in a DAKO PT link. Slides were peroxidase blocked in 3% H2O2 in methanol for 10 mins. They were then blocked with Dako Protein block for 10 minutes (containing casein 0.25% in PBS) then incubated with primary antibody for 20 min and detected with Dako envision flex amplification kit for 30 minutes. Colorimetric detection was completed with Diaminobenzidine for 5 minutes. Slides were counterstained with Haematoxylin and coverslipped under DePeX. Please note that, for manual staining, optimization of primary antibody concentration and incubation time is recommended. Signal amplification may be required.
ICC/IF image of ab15098 stained Hek293 cells. The cells were 100% methanol fixed (5 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab15098, 5µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 goat anti-rabbit IgG (H+L) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.

ab15098 staining Claudin 1 in mouse kidney tissue sections by IHC-P (paraformaldehyde-fixed paraffin-embedded sections). Tissue samples were fixed with paraformaldehyde and blocked with 20% serum for 30 minutes at 22°C; antigen retrieval was by heat mediation in Citrate buffer (pH6). The sample was incubated with primary antibody (1/500 in blocking buffer) at 22°C for 16 hours. A Biotin-conjugated Donkey polyclonal to rabbit IgG (1/250) was used as secondary antibody.
Immunohistochemical analysis of acetone-fixed frozen murine mammary gland, labelling Claudin 1 with ab15098 used at a dilution of 1/200 incubated for 16 hours at 4°C in PBS with 0.025% Triton. Blocking was with 10% serum incubated for 1 hour at 25°C. The secondary used was a polyclonal goat anti-rabbit Alexa Fluor® 568 conjugate used at 1/1000.

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