

Claudin-1 Antibody

✓ 100 µl
(10 western blots)

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This product is intended for research purposes only. This product is not intended to be used for therapeutic or diagnostic purposes in humans or animals.

Entrez-Gene ID #9076
Swiss-Prot Acc. #O95832

Applications W, IP Endogenous	Species Cross-Reactivity* H, (M, R)	Molecular Wt. 20 kDa	Source Rabbit**
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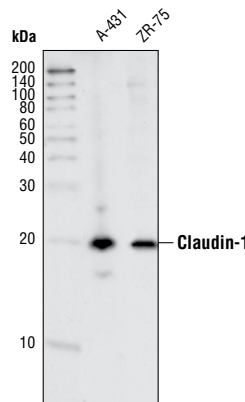
Background: Tight junctions, or zonula occludens, form a continuous barrier to fluids across the epithelium and endothelium. They function in regulation of paracellular permeability and in the maintenance of cell polarity, blocking the movement of transmembrane proteins between the apical and the basolateral cell surfaces. Tight junctions are composed of claudin and occludin proteins, which join the junctions to the cytoskeleton (1,2). The claudin family is composed of 23 integral membrane proteins, and their expression, which varies among tissue types, may determine both the strength and properties of the epithelial barrier. Alteration in claudin protein expression pattern is associated with several types of cancer (2,3). Claudin-1 is expressed primarily in keratinocytes (4) and normal mammary epithelial cells, but is absent or reduced in breast carcinomas and breast cancer cell lines (5,6).

Specificity/Sensitivity: Claudin-1 Antibody detects endogenous levels of total claudin-1 protein. Based on sequence similarity, the antibody may cross-react with claudin-2.

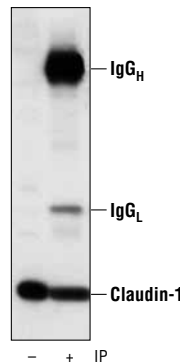
Source/Purification: Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to the carboxy terminus of mouse claudin-1. Antibodies are purified using protein A and peptide affinity chromatography.

Background References:

- (1) Shin, K. et al. (2006) *Annu. Rev. Cell Dev. Biol.* 22, 207–235.
- (2) Oliveira, S.S. and Morgado-Díaz, J.A. (2007) *Cell Mol. Life Sci.* 64, 17–28.
- (3) Hewitt, K.J. et al. (2006) *BMC Cancer* 6, 186.
- (4) Brandner, J.M. et al. (2002) *Eur. J. Cell Biol.* 81, 253–263.
- (5) Krämer, F. et al. (2000) *Hum. Genet.* 107, 249–256.
- (6) Swisshelm, K. et al. (1999) *Gene* 226, 285–295.



Western blot analysis of extracts from A431 and ZR-75 cells using Claudin-1 Antibody.



Immunoprecipitation of claudin-1 from A431 cell extract using Claudin-1 Antibody. Western blot analysis was performed using the same antibody.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

*Species cross-reactivity is determined by western blot.

**Anti-rabbit secondary antibodies must be used to detect this antibody.

Recommended Antibody Dilutions:

Western blotting 1:1000
Immunoprecipitation 1:25

For application specific protocols please see the web page for this product at www.cellsignal.com.

Please visit www.cellsignal.com for a complete listing of recommended companion products.

IMPORTANT: For western blots, incubate membrane with diluted antibody in 5% w/v nonfat dry milk, 1X TBS, 0.1% Tween-20 at 4°C with gentle shaking, overnight.

Applications Key: W—Western IP—Immunoprecipitation IHC—Immunohistochemistry ChIP—Chromatin Immunoprecipitation IF—Immunofluorescence F—Flow cytometry E-P—ELISA-Peptide
Species Cross-Reactivity Key: H—human M—mouse R—rat Hm—hamster Mk—monkey Mi—mink C—chicken Dm—D. melanogaster X—Xenopus Z—zebrafish B—bovine
Dg—dog Pg—pig Sc—S. cerevisiae Ce—C. elegans Hr—horse All—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.