

# claudin-18 (P-14): sc-17687

## BACKGROUND

The claudin superfamily consists of many structurally related proteins in humans. These proteins are important structural and functional components of tight junctions in paracellular transport. Claudins are located in both epithelial and endothelial cells in all tight junction-bearing tissues. Three classes of proteins are known to localize to tight junctions, including the claudins, occludin and junction adhesion molecule. Claudins, which consist of four transmembrane domains and two extracellular loops, make up tight junction strands. Emerging evidence suggests that the claudin family of proteins regulates transport through tight junctions via differential discrimination for solute size and charge. Claudin expression is often highly restricted to specific regions of different tissues and may have an important role in transcellular transport through tight junctions.

## REFERENCES

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2. Fujita, K., Katahira, J., Horiguchi, Y., Sonoda, N., Furuse, M. and Tsukita, S. 2000. *Clostridium perfringens* enterotoxin binds to the second extracellular loop of claudin-3, a tight junction integral membrane protein. *FEBS Lett.* 476: 258-261.
3. Heiskala, M., Peterson, P.A. and Yang, Y. 2001. The roles of claudin superfamily proteins in paracellular transport. *Traffic* 2: 93-98.
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5. Anderson, J.M. 2001. Molecular structure of tight junctions and their role in epithelial transport. *News Physiol. Sci.* 16: 126-130.
6. Rahner, C., Mitic, L.L. and Anderson, J.M. 2001. Heterogeneity in expression and subcellular localization of claudins 2, 3, 4, and 5 in the rat liver, pancreas, and gut. *Gastroenterology* 120: 411-422.

## CHROMOSOMAL LOCATION

Genetic locus: CLDN18 (human) mapping to 3q22.3; Cldn18 (mouse) mapping to 9 E3.3.

## SOURCE

claudin-18 (P-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of claudin-18 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-17687 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## APPLICATIONS

claudin-18 (P-14) is recommended for detection of claudin-18 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

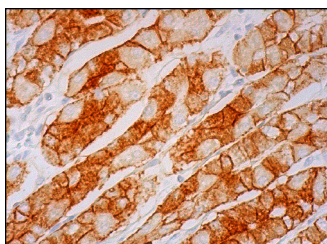
claudin-18 (P-14) is also recommended for detection of claudin-18 in additional species, including equine and bovine.

Suitable for use as control antibody for claudin-18 siRNA (h): sc-105208, claudin-18 siRNA (m): sc-142363, claudin-18 shRNA Plasmid (h): sc-105208-SH, claudin-18 shRNA Plasmid (m): sc-142363-SH, claudin-18 shRNA (h) Lentiviral Particles: sc-105208-V and claudin-18 shRNA (m) Lentiviral Particles: sc-142363-V.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941. 3) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

## DATA



claudin-18 (P-14): sc-17687. Immunoperoxidase staining of formalin fixed, paraffin-embedded human lower stomach tissue showing membrane and cytoplasmic staining of glandular cells.

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.