

# claudin-8 (C-12): sc-33063

## 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. Claudin-8 is expressed in the distal renal tubule where it is crucial in the paracellular cation barrier of the distal renal tubule.

## REFERENCES

1. Go, M., Kojima, T., Takano, K., Murata, M., Ichimiya, S., Tsubota, H., Himi, T. and Sawada, N. 2004. Expression and function of tight junctions in the crypt epithelium of human palatine tonsils. *J. Histochem. Cytochem.* 52: 1627-1638.
2. Wattenhofer, M., Reymond, A., Falciola, V., Charollais, A., Caille, D., Borel, C., Lyle, R., Estivill, X., Petersen, M.B., Meda, P. and Antonarakis, S.E. 2005. Different mechanisms preclude mutant CLDN14 proteins from forming tight junctions *in vitro*. *Hum. Mutat.* 25: 543-549.
3. Van Itallie, C.M., Gambling, T.M., Carson, J.L. and Anderson, J.M. 2005. Palmitoylation of claudins is required for efficient tight-junction localization. *J. Cell Sci.* 118: 1427-1436.

## CHROMOSOMAL LOCATION

Genetic locus: CLDN8 (human) mapping to 21q22.11; Cldn8 (mouse) mapping to 16 C3.3.

## SOURCE

claudin-8 (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of claudin-8 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-33063 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

claudin-8 (C-12) is recommended for detection of claudin-8 of human and, to a lesser extent, mouse origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (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-8 (C-12) is also recommended for detection of claudin-8 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for claudin-8 siRNA (h): sc-44865, claudin-8 siRNA (m): sc-44866, claudin-8 shRNA Plasmid (h): sc-44865-SH, claudin-8 shRNA Plasmid (m): sc-44866-SH, claudin-8 shRNA (h) Lentiviral Particles: sc-44865-V and claudin-8 shRNA (m) Lentiviral Particles: sc-44866-V.

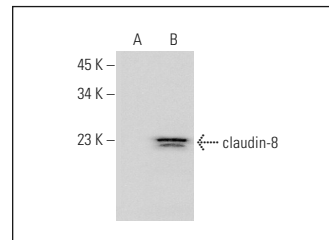
Molecular Weight of claudin-8: 25 kDa.

Positive Controls: claudin-8 (m): 293T Lysate: sc-119292.

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



claudin-8 (C-12): sc-33063. Western blot analysis of claudin-8 expression in non-transfected: sc-117752 (A) and mouse claudin-8 transfected: sc-119292 (B) 293T whole cell lysates.

## RESEARCH USE

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