

claudin-8 (H-65): sc-66834

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. Jeansonne, B., et al. 2003. Claudin-8 interacts with multi-PDZ domain protein 1 (MUPP1) and reduces paracellular conductance in epithelial cells. *Cell. Mol. Biol.* 49: 13-21.
2. Yu, A.S., et al. 2003. Claudin-8 expression in Madin-Darby canine kidney cells augments the paracellular barrier to cation permeation. *J. Biol. Chem.* 278: 17350-17359.
3. Go, M., et al. 2004. Expression and function of tight junctions in the crypt epithelium of human palatine tonsils. *J. Histochem. Cytochem.* 52: 1627-1638.
4. Wattenhofer, M., et al. 2005. Different mechanisms preclude mutant CLDN14 proteins from forming tight junctions *in vitro*. *Hum. Mutat.* 25: 543-549.
5. Van Itallie, C.M., et al. 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.

SOURCE

claudin-8 (H-65) is a rabbit polyclonal antibody raised against amino acids 161-225 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.

STORAGE

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

RESEARCH USE

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

APPLICATIONS

claudin-8 (H-65) is recommended for detection of claudin-8 of human 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 (H-65) is also recommended for detection of claudin-8 in additional species, including equine and bovine.

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

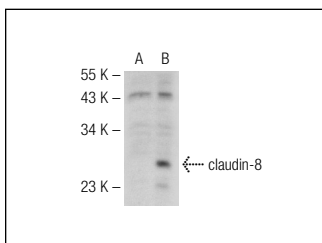
Molecular Weight of claudin-8: 25 kDa.

Positive Controls: claudin-8 (h): 293T Lysate: sc-176061.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



claudin-8 (H-65): sc-66834. Western blot analysis of claudin-8 expression in non-transfected: sc-117752 (A) and human claudin-8 transfected: sc-176061 (B) 293T whole cell lysates.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.