

claudin-14 (C-17): sc-47842

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 molecules. Claudins, which consist of four transmembrane domains and two extracellular loops, make up tight junction strands. 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-14 is a multi-pass membrane protein that is expressed in liver, kidney and ear. Defects in the gene encoding claudin-14 are the cause of non-syndromic sensorineural deafness autosomal recessive type 29 (DFNB29), a form of hearing loss resulting from damage to either nerve pathways or neural receptors of the inner ear.

REFERENCES

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6. 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.
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CHROMOSOMAL LOCATION

Genetic locus: CLDN14 (human) mapping to 21q22.13; Cldn14 (mouse) mapping to 16 C4.

SOURCE

claudin-14 (C-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of claudin-14 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-47842 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

claudin-14 (C-17) is recommended for detection of claudin-14 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

claudin-14 (C-17) is also recommended for detection of claudin-14 in additional species, including equine.

Suitable for use as control antibody for claudin-14 siRNA (h): sc-60391, claudin-14 siRNA (m): sc-60392, claudin-14 shRNA Plasmid (h): sc-60391-SH, claudin-14 shRNA Plasmid (m): sc-60392-SH, claudin-14 shRNA (h) Lentiviral Particles: sc-60391-V and claudin-14 shRNA (m) Lentiviral Particles: sc-60392-V.

Molecular Weight of claudin-14: 26 kDa.

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.

SELECT PRODUCT CITATIONS

1. Wongdee, K., Pandaranandaka, J., Teerapornpuntakit, J., Tudpor, K., Thongbunchoo, J., Thongon, N., Jantarajit, W., Krishnamra, N. and Charoenphandhu, N. 2008. Osteoblasts express claudins and tight junction-associated proteins. *Histochem. Cell Biol.* 130: 79-90.

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.