

claudin-19 (M-16): sc-162689

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-19 is a 224 amino acid multi-pass membrane protein that belongs to the claudin family and is expressed as 2 isoforms due to alternative splicing events. Defects in the gene encoding claudin-19 are the cause of hypomagnesemia renal with ocular involvement (HOMGO), a renal disease characterized by hypomagnesemia, hypercalciuria and nephrocalcinosis.

REFERENCES

1. Fanning, A.S., et al. 1999. Transmembrane proteins in the tight junction barrier. *J. Am. Soc. Nephrol.* 10: 1337-1345.
2. Fujita, K., et al. 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., et al. 2001. The roles of Claudin superfamily proteins in paracellular transport. *Traffic* 2: 93-98.
4. Nishiyama, R., et al. 2001. IL-2 receptor β subunit dependent and independent regulation of intestinal epithelial tight junctions. *J. Biol. Chem.* 276: 35571-35580.
5. Anderson, J.M. 2001. Molecular structure of tight junctions and their role in epithelial transport. *News Physiol. Sci.* 16: 126-130.

CHROMOSOMAL LOCATION

Genetic locus: *Cldn19* (mouse) mapping to 4 D2.1.

SOURCE

claudin-19 (M-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of claudin-19 of mouse 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-162689 P, (100 μ g 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.

APPLICATIONS

claudin-19 (M-16) is recommended for detection of claudin-19 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with other claudin family members.

Suitable for use as control antibody for claudin-19 siRNA (m): sc-142364, claudin-19 shRNA Plasmid (m): sc-142364-SH and claudin-19 shRNA (m) Lentiviral Particles: sc-142364-V.

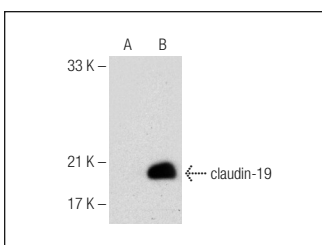
Molecular Weight of claudin-19: 22 kDa.

Positive Controls: claudin-19 (h): 293T Lysate: sc-114824.

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-19 (M-16): sc-162689. Western blot analysis of claudin-19 expression in non-transfected: sc-117752 (A) and human claudin-19 transfected: sc-114824 (B) 293T whole cell lysates.

RESEARCH USE

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

MONOS
Satisfaction
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Try **claudin-19 (C-5): sc-365967** or **claudin-19 (H-4): sc-365968**, our highly recommended monoclonal alternatives to claudin-19 (M-16).