SANTA CRUZ BIOTECHNOLOGY, INC.

claudin-9 (P-11): sc-17671

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. Claudin expression is often highly restricted to specfic regions of different tissues and may have an important role in transcellular transport through tight junctions. Claudin-9 is highly similar to Claudin-3 (also designated Clostridium perfringens enterotoxin receptor). Claudin-9 is expressed in simian virus (SV)40-immortalized human corneal epithelial (THCE) cells. The human Claudin-9 gene maps to chromosome 16p13.3.

REFERENCES

1. Fanning, A.S., Mitic, L.L. and Anderson, J.M. 1999. Transmembrane proteins in the tight junction barrier. J. Am. Soc Nephrol. 10: 1337-1345.
2. Yi, X., Wang, Y. and Yu, F.S. 2000. Corneal epithelial tight junctions and their response to lipopolysaccharide challenge. Invest. Ophthalmol. Vis. Sci. 41: 4093-4100.
3. 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.
4. 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.
5. Nishiyama, R., Sakaguchi, T., Kinugasa, T., Gu, X., MacDermott, R.P., Podolsky, D.K. and Reinecker, H.C. 2001. IL-2 receptor beta subunit dependent and independent regulation of intestinal epithelial tight junctions. J. Biol. Chem. 21: 35571-35580
6. Heiskala, M., Peterson, P.A. and Yang, Y. 2001. The roles of Claudin superfamily proteins in paracellular transport. Traffic 2: 93-98.

SOURCE

claudin-9 (P-11) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of claudin-9 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-17671 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.

APPLICATIONS

claudin-9 (P-11) is recommended for detection of claudin-9 of human and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for claudin-9 siRNA (h): sc-43050, claudin-9 siRNA (m): sc-43051, claudin-9 shRNA Plasmid (h): sc-43050-SH, claudin-9 shRNA Plasmid (m): sc-43051-SH, claudin-9 shRNA (h) Lentiviral Particles: sc-43050-V and claudin-9 shRNA (m) Lentiviral Particles: sc-43051-V.

Molecular Weight of claudin-9: 23 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.

RESEARCH USE

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

PROTOCOLS

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