SANTA CRUZ BIOTECHNOLOGY, INC.

claudin-10 (H-58): sc-25710

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

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 specfic regions of different tissues and may have an important role in transcellular transport through tight junctions. claudin-10 is a 228 amino acid multi-pass membrane protein that belongs to the claudin family and plays an important role in cell-adhesion activity and tight junction-specific events.

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. 21: 35571-35580.
5. Anderson, J.M. 2001. Molecular structure of tight junctions and their role in epithelial transport. News Physiol. Sci. 16: 126-130.
6. Rahner, C., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: CLDN10 (human) mapping to 13q32.1; Cldn10 (mouse) mapping to 14 E4.

SOURCE

claudin-10 (H-58) is a rabbit polyclonal antibody raised against amino acids 171-228 mapping at the C-terminus of claudin-10 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-10 (H-58) is recommended for detection of claudin-10 of mouse, rat and 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).

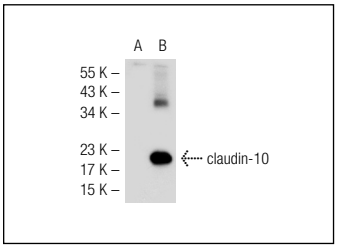
claudin-10 (H-58) is also recommended for detection of claudin-10 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for claudin-10 siRNA (h): sc-43052, claudin-10 siRNA (m): sc-43053, claudin-10 shRNA Plasmid (h): sc-43052-SH, claudin-10 shRNA Plasmid (m): sc-43053-SH, claudin-10 shRNA (h) Lentiviral Particles: sc-43052-V and claudin-10 shRNA (m) Lentiviral Particles: sc-43053-V.

Molecular Weight of claudin-10 isoforms: 23/19 kDa.

Positive Controls: claudin-10 (m2): 293T Lysate: sc-119283.

DATA



claudin-10 (H-58): sc-25710. Western blot analysis of claudin-10 expression in non-transfected: sc-117752 (**A**) and mouse claudin-10 transfected: sc-119283 (**B**) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

1. Baker, O.J., et al. 2008. Proinflammatory cytokines tumor necrosis factor-α and interferon-γ alter tight junction structure and function in the rat parotid gland Par-C10 cell line. Am. J. Physiol., Cell Physiol. 295: C1191-C1201.
2. Yoshida, Y., et al. 2009. Tight junction transmembrane protein claudin subtype expression and distribution in human corneal and conjunctival epithelium. Invest. Ophthalmol. Vis. Sci. 50: 2103-2108.
3. Charoenphandhu, N., et al. 2009. Two-step stimulation of intestinal Ca^{2+} absorption during lactation by long-term prolactin exposure and suckling-induced prolactin surge. Am. J. Physiol. Endocrinol. Metab. 297: E609-E619.