SANTA CRUZ BIOTECHNOLOGY, INC.

claudin-11 (D-8): sc-271232

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-8 is a multi-pass membrane protein that belongs to the claudin family. Localized to the caput and the lateral margins of principal cells, claudin-8 plays an important role in tight junction-specific obliteration of the intercellular space.

CHROMOSOMAL LOCATION

Genetic locus: CLDN11 (human) mapping to 3q26.2; Cldn11 (mouse) mapping to 3 A3.

SOURCE

claudin-11 (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 184-207 at the C-terminus of claudin-11 of human origin.

PRODUCT

Each vial contains 200 µg IgA kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-271232 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

claudin-11 (D-8) is recommended for detection of claudin-11 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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-11 siRNA (h): sc-43054, claudin-11 siRNA (m): sc-43055, claudin-11 shRNA Plasmid (h): sc-43054-SH, claudin-11 shRNA Plasmid (m): sc-43055-SH, claudin-11 shRNA (h) Lentiviral Particles: sc-43054-V and claudin-11 shRNA (m) Lentiviral Particles: sc-43055-V.

Molecular Weight of claudin-11: 20 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, C6 whole cell lysate: sc-364373 or Neuro-2A whole cell lysate: sc-364185.

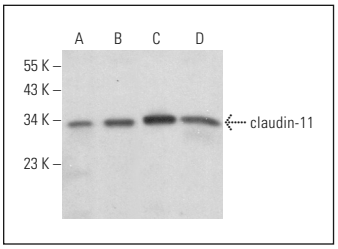
RESEARCH USE

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

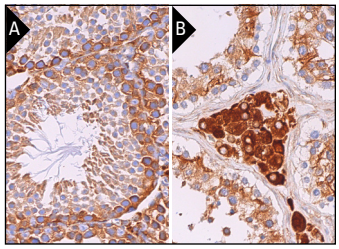
STORAGE

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

DATA



claudin-11 (D-8): sc-271232. Western blot analysis of claudin-11 expression in Neuro-2A (**A**), C6 (**B**), RAW 264.7 (**C**) and F9 (**D**) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.



claudin-11 (D-8): sc-271232. Immunoperoxidase staining of formalin fixed, paraffin-embedded mouse testis tissue showing cytoplasmic staining of cells in seminiferous ducts and Leydig cells (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human testis tissue showing membrane and cytoplasmic staining of cells in seminiferous ducts and cytoplasmic staining of Leydig cells (**B**).

SELECT PRODUCT CITATIONS

1. Hart, L., et al. 2014. LETM1 haploinsufficiency causes mitochondrial defects in cells from humans with Wolf-Hirschhorn syndrome: implications for dissecting the underlying pathomechanisms in this condition. Dis. Model. Mech. 7: 535-545.
2. Jiang, T., et al. 2015. Silencing of TREM2 exacerbates Tau pathology, neurodegenerative changes, and spatial learning deficits in P301S Tau transgenic mice. Neurobiol. Aging 36: 3176-3186.
3. Baek, J.M., et al. 2018. Claudin 11 regulates bone homeostasis via bidirectional EphB4-EphrinB2 signaling. Exp. Mol. Med. 50: 1-18.
4. Xia, X., et al. 2019. EspF is crucial for *Citrobacter rodentium*-induced tight junction disruption and lethality in immunocompromised animals. PLoS Pathog. 15: e1007898.
5. Patyal, P., et al. 2020. The wmN1 enhancer region of the mouse myelin proteolipid protein gene (mPlp1) is indispensable for expression of an mPlp1-lacZ transgene in both the CNS and PNS. Neurochem. Res. 45: 663-671.
6. Antonuccio, P., et al. 2021. The nutraceutical N-palmitoylethanolamide (PEA) reveals widespread molecular effects unmasking new therapeutic targets in murine varicocele. Nutrients 13: 734.
7. Hosoya, M., et al. 2022. Development of the stria vascularis in the common marmoset, a primate model. Sci. Rep. 12: 19811.
8. Hu, R., et al. 2022. Polystyrene nanoplastics promote CHIP-mediated degradation of tight junction proteins by activating IRE1α/XBP1s pathway in mouse Sertoli cells. Ecotoxicol. Environ. Saf. 248: 114332.

PROTOCOLS

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