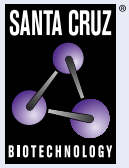
SANTA CRUZ BIOTECHNOLOGY, INC.

claudin-9 (E-7): sc-398836



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 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., et al. 1999. Transmembrane proteins in the tight junction barrier. J. Am. Soc. Nephrol. 10: 1337-1345.
2. Yi, X., et al. 2000. Corneal epithelial tight junctions and their response to lipopolysaccharide challenge. Invest. Ophthalmol. Vis. Sci. 41: 4093-4100.
3. 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.
4. Heiskala, M., et al. 2001. The roles of claudin superfamily proteins in paracellular transport. Traffic 2: 93-98.

CHROMOSOMAL LOCATION

Genetic locus: CLDN9 (human) mapping to 16p13.3; Cldn9 (mouse) mapping to 17 A3.3.

SOURCE

claudin-9 (E-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 191-217 at the C-terminus of claudin-9 of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

claudin-9 (E-7) is available conjugated to agarose (sc-398836 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-398836 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398836 PE), fluorescein (sc-398836 FITC), Alexa Fluor® 488 (sc-398836 AF488), Alexa Fluor® 546 (sc-398836 AF546), Alexa Fluor® 594 (sc-398836 AF594) or Alexa Fluor® 647 (sc-398836 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398836 AF680) or Alexa Fluor® 790 (sc-398836 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398836 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

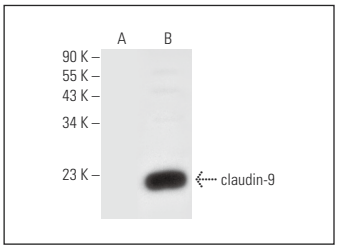
claudin-9 (E-7) is recommended for detection of claudin-9 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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.

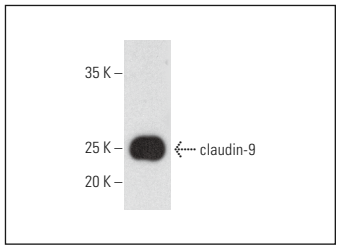
Molecular Weight of claudin-9: 23 kDa.

Positive Controls: claudin-9 (h2): 293T Lysate: sc-111499 or RPE-J cell lysate: sc-24771.

DATA



claudin-9 (E-7): sc-398836. Western blot analysis of claudin-9 expression in non-transfected: sc-117752 (**A**) and human claudin-9 transfected: sc-111499 (**B**) 293T whole cell lysates.



claudin-9 (E-7): sc-398836. Western blot analysis of claudin-9 expression in RPE-J whole cell lysate.

SELECT PRODUCT CITATIONS

1. Park, S.Y., et al. 2021. Expression of E-cadherin in epithelial cancer cells increases cell motility and directionality through the localization of ZO-1 during collective cell migration. Bioengineering 8: 65.
2. Higashi, A.Y., et al. 2021. Claudin-9 constitutes tight junctions of folliculo-stellate cells in the anterior pituitary gland. Sci. Rep. 11: 21642.

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.

PROTOCOLS

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

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