

claudin-3 (M-20): sc-17662

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 (JAM). Claudins, which consist of four trans-membrane domains and two extracellular loops, make up tight junction strands. Claudin expression is highly restricted to specific regions of different tissues and variations of Claudin expression may have an important role in transcellular transport through tight junctions. In rat liver, claudin-3 is uniformly expressed, whereas in the pancreas, claudin-3 is expressed in junctions of the duct epithelia and junctions of acinar cells. Claudin-3 binds the peptide toxin *Clostridium perfringens* enterotoxin (CPE) at the cell surface via the second extracellular loop of claudin-3. The gene encoding human claudin-3 maps to chromosome 7q11.23.

CHROMOSOMAL LOCATION

Genetic locus: CLDN3 (human) mapping to 7q11.23; Cldn3 (mouse) mapping to 5 G2.

SOURCE

claudin-3 (M-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of claudin-3 of mouse 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-17662 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

claudin-3 (M-20) is recommended for detection of claudin-3 of mouse, rat and, to a lesser extent, 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), 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).

claudin-3 (M-20) is also recommended for detection of claudin-3 in additional species, including bovine.

Suitable for use as control antibody for claudin-3 siRNA (h): sc-43042, claudin-3 siRNA (m): sc-43043, claudin-3 shRNA Plasmid (h): sc-43042-SH, claudin-3 shRNA Plasmid (m): sc-43043-SH, claudin-3 shRNA (h) Lentiviral Particles: sc-43042-V and claudin-3 shRNA (m) Lentiviral Particles: sc-43043-V.

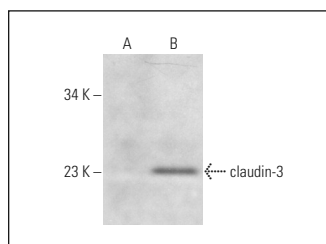
Molecular Weight of claudin-3: 23 kDa.

Positive Controls: rat kidney extract: sc-2394, mouse kidney extract: sc-2255 or claudin-3 (h): 293T Lysate: sc-176276

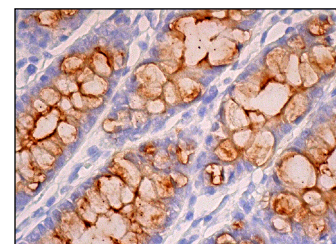
RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2053 or ABC: sc-2023 goat IgG Staining Systems.

DATA



claudin-3 (M-20): sc-17662. Western blot analysis of claudin-3 expression in non-transfected: sc-117752 (A) and human claudin-3 transfected: sc-176276 (B) 293T whole cell lysates.



claudin-3 (M-20): sc-17662. Immunoperoxidase staining of formalin fixed, paraffin-embedded human rectum tissue showing membrane and cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Ronaldson, P.T., et al. 2009. Transforming growth factor-β signaling alters substrate permeability and tight junction protein expression at the blood-brain barrier during inflammatory pain. *J. Cereb. Blood Flow Metab.* 29:1084-1098.

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 or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **claudin-3 (2F2): sc-293219**, our highly recommended monoclonal alternative to claudin-3 (M-20).