**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 specific regions of different tissues and may have an important role in paracellular transport through tight junctions. Claudin-1 is a multi-pass membrane protein that is expressed at high levels in kidney and liver and at lower levels in spleen, heart, brain, lung and testis. Defects in the gene encoding claudin-1 are the cause of ichthyosis-sclerosing cholangitis neonatal syndrome (NISCH), an autosomal recessive syndrome characterized by vulgar type ichthyosis, scalp hypotrichosis, scarring alopecia and sclerosing cholangitis.

**CHROMOSOMAL LOCATION**

Genetic locus: CLDN1 (human) mapping to 3q28; Cldh1 (mouse) mapping to 16 B2.

**SOURCE**

claudin-1 (A-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 168-207 at the C-terminus of claudin-1 of human origin.

**PRODUCT**

Each vial contains 200 µg IgG2b kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

claudin-1 (A-9) is available conjugated to agarose (sc-166338 AC), 500 µg/ml, for WB. claudin-1 is also recommended for detection of claudin-1 in additional species, including equine, canine and bovine.

Blocking peptide available for competition studies, sc-166338P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA.

**STORAGE**

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

**PROTOCOLS**

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

**APPLICATIONS**

claudin-1 (A-9) is recommended for detection of claudin-1 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).

claudin-1 (A-9) is also recommended for detection of claudin-1 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for claudin-1 siRNA (h): sc-43040, claudin-1 siRNA (m): sc-43041, claudin-1 shRNA Plasmid (h): sc-43040-SH, claudin-1 shRNA Plasmid (m): sc-43041-SH, claudin-1 shRNA (h) Lentiviral Particles: sc-43040-V and claudin-1 shRNA (m) Lentiviral Particles: sc-43041-V.

Molecular Weight of claudin-1: 22 kDa.

Positive Weight: claudin-1 (h): 293T Lysate: sc-113827, SCC-4 whole cell lysate: sc-364363 or T24 cell lysate: sc-2292.

**DATA**

**SELECT PRODUCT CITATIONS**


**RESEARCH USE**

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