

# claudin-12 (C-18): sc-69354

## BACKGROUND

The claudin superfamily consists of many structurally related proteins that are important structural and functional components of tight junctions. Claudin-12, also known as CLDN12, is a 244 amino acid multi-pass membrane protein that is expressed in the brain, duodenum, jejunum, ileum, and colon. Claudin-12 localizes to cell junctions and may be involved in tight junction integrity by regulating hyperammonemia. Ammonia can alter brain capillary endothelial cell gene expression and transporter function. Claudin-12 is upregulated in enterocytes through vitamin D receptors which strongly suggest that claudin-12 forms paracellular  $Ca^{2+}$  channels in intestinal epithelia and may be critical for vitamin D-dependent calcium homeostasis.

## REFERENCES

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## CHROMOSOMAL LOCATION

Genetic locus: CLDN12 (human) mapping to 7q21.13; Cldn12 (mouse) mapping to 5 A1.

## SOURCE

claudin-12 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of claudin-12 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-69354 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

claudin-12 (C-18) is recommended for detection of claudin-12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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-12 (C-18) is also recommended for detection of claudin-12 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for claudin-12 siRNA (h): sc-72915, claudin-12 siRNA (m): sc-72916, claudin-12 shRNA Plasmid (h): sc-72915-SH, claudin-12 shRNA Plasmid (m): sc-72916-SH, claudin-12 shRNA (h) Lentiviral Particles: sc-72915-V and claudin-12 shRNA (m) Lentiviral Particles: sc-72916-V.

Molecular Weight of claudin-12: 27 kDa.

## 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) 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.

## 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](http://www.scbt.com) or our catalog for detailed protocols and support products.