

claudin-2 (A-24): sc-133464

BACKGROUND

The claudin superfamily consists of structurally related proteins that are important structural and functional components of tight junctions. Claudin-2, also known as CLDN2 or SP82, is a 230 amino acid multi-pass membrane protein that localizes to the cell junctions and belongs to the claudin superfamily. Able to form homopolymers of heteropolymers with other claudin family members, claudin-2 plays an essential role in mediating calcium-independent cell adhesion activity that is necessary for tight junction-specific obliteration of the intercellular space. Overexpression of claudin-2 is associated with a variety of diseases, including lung cancer, colorectal cancer, gastrointestinal carcinomas and inflammatory bowel disease, further affirming the importance of claudin-2 in cell adhesion. The gene encoding claudin-2 maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES

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3. Heiskala, M., et al. 2001. The roles of claudin superfamily proteins in paracellular transport. *Traffic* 2: 93-98.
4. Sakaguchi, T., et al. 2002. Cloning of the human claudin-2 5'-flanking region revealed a TATA-less promoter with conserved binding sites in mouse and human for caudal-related homeodomain proteins and hepatocyte nuclear factor-1 α . *J. Biol. Chem.* 277: 21361-21370.
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6. Escaffit, F., et al. 2005. Differential expression of claudin-2 along the human intestine: Implication of GATA-4 in the maintenance of claudin-2 in differentiating cells. *J. Cell. Physiol.* 203: 15-26.
7. Aung, P.P., et al. 2006. Differential expression of claudin-2 in normal human tissues and gastrointestinal carcinomas. *Virchows Arch.* 448: 428-434.
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CHROMOSOMAL LOCATION

Genetic locus: CLDN2 (human) mapping to Xq22.3; Cldn2 (mouse) mapping to X F1.

SOURCE

claudin-2 (A-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic claudin-2 peptide of human origin.

RESEARCH USE

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

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

APPLICATIONS

claudin-2 (A-24) is recommended for detection of claudin-2 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

claudin-2 (A-24) is also recommended for detection of claudin-2 in additional species, including bovine, porcine and canine.

Suitable for use as control antibody for claudin-2 siRNA (h): sc-62124, claudin-2 siRNA (m): sc-62125, claudin-2 shRNA Plasmid (h): sc-62124-SH, claudin-2 shRNA Plasmid (m): sc-62125-SH, claudin-2 shRNA (h) Lentiviral Particles: sc-62124-V and claudin-2 shRNA (m) Lentiviral Particles: sc-62125-V.

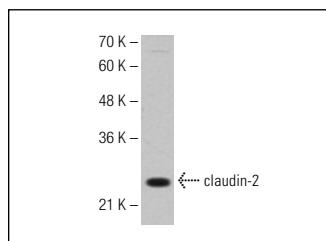
Molecular Weight of claudin-2: 25 kDa.

Positive Controls: Hep G2 cell lysate: sc-2227 or SW480 cell lysate: sc-2219.

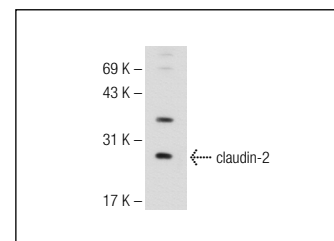
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker[™] compatible goat anti-rabbit IgG-HRP: sc-2030 (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).

DATA



claudin-2 (A-24): sc-133464. Western blot analysis of claudin-2 expression in Hep G2 whole cell lysate.



claudin-2 (A-24): sc-133464. Western blot analysis of claudin-2 expression in SW480 whole cell lysate.

STORAGE

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



Try **claudin-2 (3F1): sc-293233**, our highly recommended monoclonal alternative to claudin-2 (A-24).