10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

CLDN1 Antibody
Catalog # ASC10912

Specification

CLDN1 Antibody - Product Information

Application	**WB, IF, ICC, E**
Primary Accession	O95832
Other Accession	CAG33419, 48146393
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**IgG**
Application Notes	**CLDN1 antibody can be used for detection of CLDN1 by Western blot at 1 - 2 µg/mL. Antibody can also be used for immunocytochemistry starting at 5 µg/mL. For immunofluorescence start at 20 µg/mL.**

CLDN1 Antibody - Additional Information

Gene ID	**9076**

Target/Specificity
CLDN1;

Reconstitution & Storage
CLDN1 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.

Precautions
CLDN1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

CLDN1 Antibody - Protein Information

Name CLDN1

Synonyms CLD1, SEMP1

Function
Claudins function as major constituents of the tight junction complexes that regulate the permeability of epithelia. While some claudin family members play essential roles in the formation of impermeable barriers, others mediate the permeability to ions and small molecules. Often, several claudin family members are coexpressed and interact with each other, and this determines the overall permeability. CLDN1 is required to prevent the paracellular diffusion of small molecules through tight junctions in the epidermis and is required for the normal barrier function of the skin. Required for normal water homeostasis and to prevent excessive water loss through the skin, probably via an indirect effect on the expression levels of other proteins, since CLDN1 itself seems to be dispensable for water barrier formation in keratinocyte tight junctions (PubMed:<a

href="http://www.uniprot.org/citations/23407391" target="_blank">23407391).

Cellular Location
Cell junction, tight junction. Cell membrane; Multi-pass membrane protein. Basolateral cell membrane Note=Associates with CD81 and the CLDN1-CD81 complex localizes to the basolateral cell membrane.

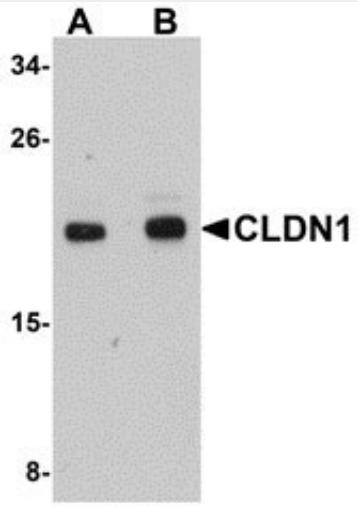
Tissue Location
Strongly expressed in liver and kidney. Expressed in heart, brain, spleen, lung and testis.

CLDN1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

CLDN1 Antibody - Images



Western blot analysis of CLDN1 in HepG2 cell lysate with CLDN1 antibody at (A) 1 and (B) 2 µg/mL.

Immunocytochemistry of CLDN1 in HepG2 cells with CLDN1 antibody at 5 µg/mL.

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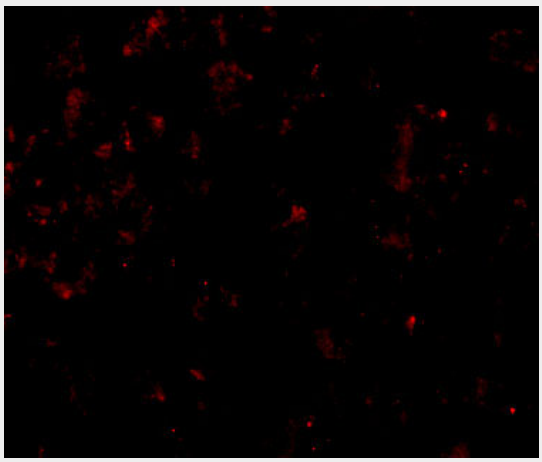

Immunofluorescence of CLDN1 in HepG2 cells with CLDN1 antibody at 20 µg/mL.

CLDN1 Antibody - Background

CLDN1 Antibody: Claudin1 (CLDN1), a member of the claudin family, is an integral membrane protein and a component of tight junction strands. Tight junctions are specialized regions of cell to cell contact consisting of networking strands that act as a molecular gasket for preventing the leakage of ions, water, etc., between cells. They are abundant in luminal epithelial sheets where they maintain epithelial cell polarity. Different tissues exhibit different Claudin composition and CLDN1 expression is often cell type and tissue dependent. Loss of function mutations result in neonatal ichthyosis-sclerosing cholangitis syndrome. CLDN1 and CLDN2 were found to be overexpressed in colonal cancer tissues and may be useful as tumor markers and targets for the treatment of colorectal cancer. Characterization of Claudins expression in human tumors can be an additional diagnostic tool. Recent studies show that CLDN1 has gastric tumor suppressive activity and is a direct transcriptional target of RUNX3. Along with SCARB1, LDL-R, and the tetraspanin superfamily member CD81, CLDN1 has been reported to be an entry factor for the Hepatitis C virus.

CLDN1 Antibody - References

Tepass U. Claudin complexities at the apical junctional complex. Nat. Cell Biol.2003; 5:595-7.
Kinugasa T, Huo Q, Higashi D, et al. Selective up-regulation of claudin-1 and claudin-2 in colorectal cancer. Anticancer Res.2007; 27:3729-34.
Paschoud S, Bongiovanni M, Pache JC, et al. Claudin-1 and claudin-5 expression patterns differentiate lung squamous cell carcinomas from adenocarcinomas. Mod. Pathol.2007; 20:947-954.
Morohashi S, Kasumi T, Sato F, et al. Decreased expression of claudin-1 correlates with recurrence status in breast cancer. Int. J. Mol. Med.2007; 20:139-43.