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Rabbit Anti-Claudin 1 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP52052

Product Information

Application	WB, IHC-P, IHC-F, IF, E
Primary Accession	O88551
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	22881
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse Claudin 1
Epitope Specificity	121-211/211
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Cell junction, tight junction. Cell membrane; Multi-pass membrane protein.
SIMILARITY	Belongs to the claudin family.
SUBUNIT	Can form homo- and heteropolymers with other CLDN. Homopolymers interact with CLDN3, but not CLDN2, homopolymers. Directly interacts with TJP1/ZO-1, TJP2/ZO-2 and TJP3/ZO-3. Interacts with MPDZ and INADL.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Tight junctions represent one mode of cell-to-cell adhesion in epithelial or endothelial cell sheets, forming continuous seals around cells and serving as a physical barrier to prevent solutes and water from passing freely through the paracellular space. These junctions are comprised of sets of continuous networking strands in the outwardly facing cytoplasmic leaflet, with complementary grooves in the inwardly facing extracytoplasmic leaflet. The protein encoded by this gene, a member of the claudin family, is an integral membrane protein and a component of tight junction strands. Loss of function mutations result in neonatal ichthyosis-sclerosing cholangitis syndrome. [provided by RefSeq, Jul 2008]

Additional Information

Gene ID	12737
Other Names	AI596271; Claudin-1; Cldn1
Target/Specificity	Widely expressed, with highest levels in liver and kidney.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000

Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Cldn1
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.
Cellular Location	Cell junction, tight junction. Cell membrane; Multi-pass membrane protein. Basolateral cell membrane {ECO:0000250|UniProtKB:O95832}. Note=Associates with CD81 and the CLDN1-CD81 complex localizes to the basolateral cell membrane {ECO:0000250|UniProtKB:O95832}
Tissue Location	Detected in epidermis and liver (at protein level). Widely expressed, with highest levels in liver and kidney

Background

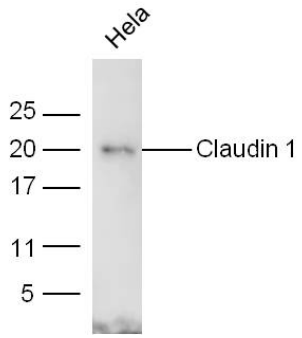
Plays a major role in tight junction-specific obliteration of the intercellular space, through calcium-independent cell-adhesion activity.

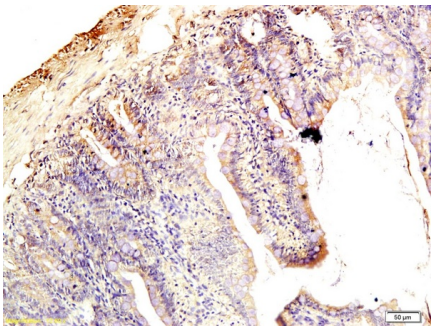
References

Furuse M.,et al.J. Cell Biol. 141:1539-1550(1998).
Carninci P.,et al.Science 309:1559-1563(2005).
Kubota K.,et al.Curr. Biol. 9:1035-1038(1999).
Furuse M.,et al.J. Cell Biol. 147:891-903(1999).
Itoh M.,et al.J. Cell Biol. 147:1351-1363(1999).

Images

HeLa lysates probed with Rabbit Anti-Claudin 1 Polyclonal Antibody (AP52052) at 1:300 overnight at 4˚C. Followed by conjugation to secondary antibody at 1:5000 for 90 min at 37˚C.





Formalin-fixed and paraffin embedded rat intestine tissue labeled with Anti-Claudin 1 Polyclonal Antibody, Unconjugated (AP52052) followed by conjugation to the secondary antibody and DAB staining