

**CLDN2 Antibody (C-term Y224)**  
**Affinity Purified Rabbit Polyclonal Antibody (Pab)**  
**Catalog # AP12633b**

**Specification**

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**CLDN2 Antibody (C-term Y224) - Product Information**

Application	FC, IHC-P, WB,E
Primary Accession	<a href="#">P57739</a>
Other Accession	<a href="#">NP_001164566.1</a> , <a href="#">NP_001164563.1</a>
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	24549
Antigen Region	200-227

**CLDN2 Antibody (C-term Y224) - Additional Information**

**Gene ID** 9075

**Other Names**

Claudin-2, SP82, CLDN2

**Target/Specificity**

This CLDN2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 200-227 amino acids from the C-terminal region of human CLDN2.

**Dilution**

FC~~1:10~50

IHC-P~~1:10~50

WB~~1:1000

E~~Use at an assay dependent concentration.

**Format**

Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

**Storage**

Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

**Precautions**

CLDN2 Antibody (C-term Y224) is for research use only and not for use in diagnostic or therapeutic procedures.

**CLDN2 Antibody (C-term Y224) - Protein Information**

**Name** CLDN2 {ECO:0000303|PubMed:31320686, ECO:0000312|HGNC:HGNC:2041}

**Function** Forms paracellular channels: polymerizes in tight junction strands with cation- and water-selective channels through the strands, conveying epithelial permeability in a process known as paracellular tight junction permeability (PubMed:[20460438](#), PubMed:[36008380](#)). In intestinal epithelium, allows for sodium and water fluxes from the peritoneal side to the lumen of the intestine to regulate nutrient absorption and clear enteric pathogens as part of mucosal immune response (By similarity). In kidney, allows passive sodium and calcium reabsorption across proximal tubules from the lumen back to the bloodstream (By similarity). In the hepatobiliary tract, allows paracellular water and cation fluxes in the hepatic perivenous areas and biliary epithelium to generate bile flow and maintain osmotic gradients (By similarity).

#### Cellular Location

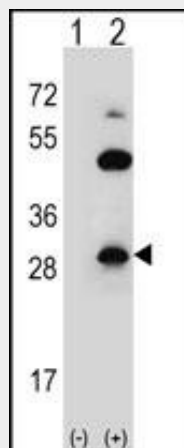
Cell junction, tight junction. Cell membrane {ECO:0000250|UniProtKB:O88552}; Multi-pass membrane protein

#### CLDN2 Antibody (C-term Y224) - Protocols

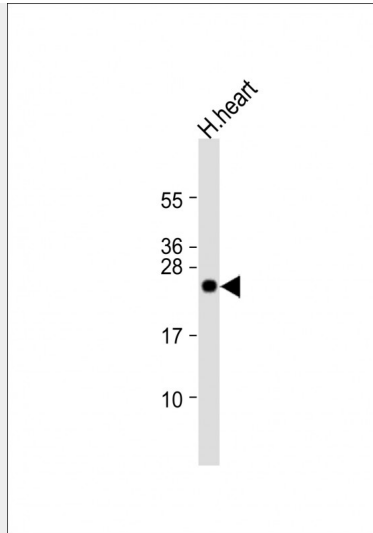
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

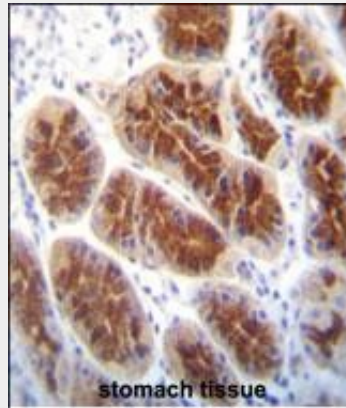
#### CLDN2 Antibody (C-term Y224) - Images



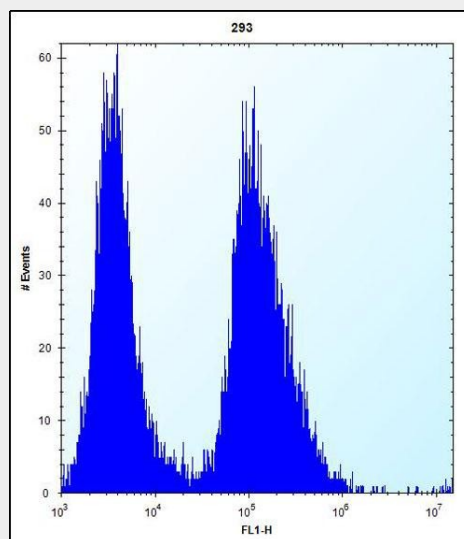
Western blot analysis of CLDN2 (arrow) using rabbit polyclonal CLDN2 Antibody (Y224) (Cat. #AP12633b). 293 cell lysates (2 ug/lane) either nontransfected (Lane 1) or transiently transfected (Lane 2) with the CLDN2 gene.



Anti-CLDN2 Antibody at 1:1000 dilution + human heart lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 25 kDa Blocking/Dilution buffer: 5% NFD/MTBST.



CLDN2 Antibody (C-term Y224) (Cat. #AP12633b) immunohistochemistry analysis in formalin fixed and paraffin embedded human stomach tissue followed by peroxidase conjugation of the secondary antibody and DAB staining. This data demonstrates the use of CLDN2 Antibody (C-term Y224) for immunohistochemistry. Clinical relevance has not been evaluated.



CLDN2 Antibody (C-term Y224) (Cat. #AP12633b) flow cytometric analysis of 293 cells (right histogram) compared to a negative control cell (left histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

### **CLDN2 Antibody (C-term Y224) - Background**

This gene product belongs to the claudin protein family whose members have been identified as major integral membrane proteins localized exclusively at tight junctions. Claudins are expressed in an organ-specific manner and regulate tissue-specific physiologic properties of tight junctions. This protein is expressed in the intestine. Alternatively spliced transcript variants with different 5' untranslated region have been found for this gene.

### **CLDN2 Antibody (C-term Y224) - References**

Smith, A.J., et al. *J. Acquir. Immune Defic. Syndr.* 55(3):306-315(2010)  
Kojima, F., et al. *Oncol. Rep.* 23(4):927-931(2010)  
Szakal, D.N., et al. *Virchows Arch.* 456(3):245-250(2010)  
Buchert, M., et al. *Proc. Natl. Acad. Sci. U.S.A.* 107(6):2628-2633(2010)  
Mankertz, J., et al. *Cell Tissue Res.* 336(1):67-77(2009)