Claudin 2 Monoclonal Antibody (12H12)

Product Details	
Size	100 µg
Species Reactivity	Dog, Human, Mouse, Rat
Published Species	Dog, Rat, Pig, Non-human primate, Hamster, Cat, Human, Mouse, Rhesus monkey
Host/Isotype	Mouse / IgG2b
Class	Monoclonal
Type	Antibody
Clone	12H12
Conjugate	Unconjugated
Immunogen	Synthetic peptide corresponding to a 26 amino acid sequence at the C-terminus of mouse Claudin-2
Form	Liquid
Concentration	0.5 mg/mL
Amount	100 µg
Purification	Protein A
Storage buffer	PBS, pH 7.4
Contains	0.1% sodium azide
Storage conditions	-20°C
RRID	AB_2533085

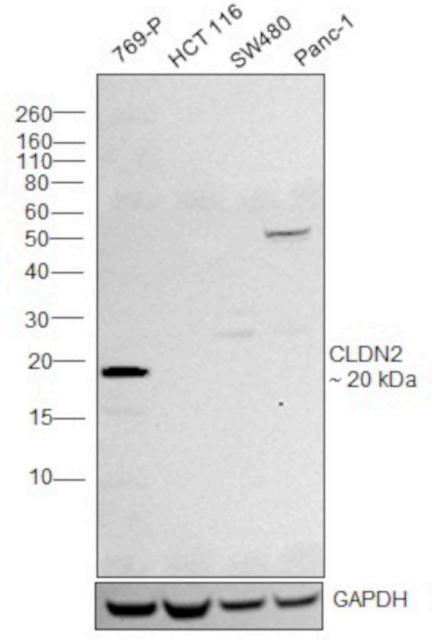
Applications	Tested Dilution	Publications
Western Blot (WB)	1-3 µg/mL	76 Publications
Immunohistochemistry (IHC)	-	34 Publications
Immunohistochemistry (Paraffin) (IHC (P))	1:10-1:100	9 Publications
Immunohistochemistry (Frozen) (IHC (F))	-	2 Publications
Immunocytochemistry (ICC/IF)	-	31 Publications
Flow Cytometry (Flow)	-	1 Publication
ELISA (ELISA)	-	2 Publications
Immunoprecipitation (IP)	Assay-dependent	1 Publication
Miscellaneous PubMed (Misc)	-	9 Publications

Product Specific Information

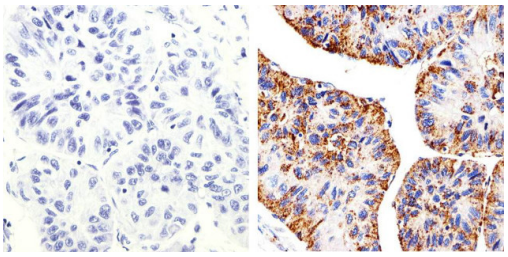
This antibody reacts specifically with the ~22-23 kDa Claudin-2 protein. Reactivity has been confirmed with human, mouse, rat, and dog liver and kidney homogenates, as well MDCK and Caco-2 cell lysates, by western blotting and immunfluorescence. Reactivity has also been confirmed with formalin-fixed, paraffin-embedded (FFPE) human normal colon, spleen, and thyroid, and colon and breast cancer tissues by immunohistochemistry.

For best results in immunohistochemistry (1-2 µg/mL) with formalin-fixed, paraffin-embedded (FFPE) tissues, heat induced epitope retrieval (HIER) with EDTA buffer, pH 8.0, is required prior to staining. In western blotting a non-specific band at 27 kDa is observed in some lysates. In Caco-2 cells this band appears stronger than the correct band at 22 kDa. An alternative product, rabbit anti-Claudin-2 (Cat. No. 516100) may be used for western blotting of these lysates.

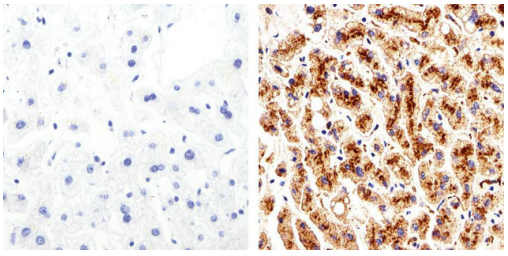
Product Images For Claudin 2 Monoclonal Antibody (12H12)



Claudin 2 Antibody (32-5600)
Antibody specificity was demonstrated by detection of differential basal expression of the target across cell lines owing to their inherent genetic constitution. Relative expression was observed in cell lines 769-P (Positive) against HCT 116, SW480 and Panc-1 (Negative) using Anti-Claudin 2 Monoclonal Antibody (12H12) (Product # 32-5600) in Western Blot. {RE}



Claudin 2 Antibody (32-5600) in IHC (P)
Immunohistochemistry analysis of Claudin 2 showing staining in the cytoplasm and membrane of paraffin-embedded human hepatocarcinoma (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Claudin 2 monoclonal antibody (Product # 32-5600) diluted in 3% BSA-PBS at a dilution of 1:20 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.



Claudin 2 Antibody (32-5600) in IHC (P)
Immunohistochemistry analysis of Claudin 2 showing staining in the cytoplasm and membrane of paraffin-embedded human liver tissue (right) compared to a negative control without primary antibody (left). To expose target proteins, antigen retrieval was performed using 10mM sodium citrate (pH 6.0), microwaved for 8-15 min. Following antigen retrieval, tissues were blocked in 3% H2O2-methanol for 15 min at room temperature, washed with ddH2O and PBS, and then probed with a Claudin 2 monoclonal antibody (Product # 32-5600) diluted in 3% BSA-PBS at a dilution of 1:20 overnight at 4°C in a humidified chamber. Tissues were washed extensively in PBST and detection was performed using an HRP-conjugated secondary antibody followed by colorimetric detection using a DAB kit. Tissues were counterstained with hematoxylin and dehydrated with ethanol and xylene to prep for mounting.

View more figures on thermofisher.com

165 References

Western Blot (76)

PloS one

Development of a novel complex inflammatory bowel disease mouse model: Reproducing human inflammatory bowel disease etiologies in mice.

"32-5600 was used in Western Blotting to develop novel complex Inflammatory bowel disease models using interleukin 2 receptor subunit gamma (Il2rg)-deficient mice, high-fat diet, dextran sodium sulfate, and Citrobacter rodentium."

Authors: Seo SM,Kim NW,Yoo ES,Lee JH,Kang AR,Jeong HB,Shim WY,Kim DH,Park YJ,Bae K,Yoon KA,Choi YK

Year 2024

Species Mouse

Dilution 1:1,000

mBio

Infant and adult human intestinal enteroids are morphologically and functionally distinct.

"32-5600 was used in Western Blotting to show that infant enteroids exhibit both transcriptomic and morphological differences compared to adult cultures."

Authors: Adeniyi-Ipadeola GO,Hankins JD,Kambal A,Zeng X-L,Patil K,Poplaski V,Bomidi C,Nguyen-Phuc H,Grimm SL,Coarfa C,Stossi F,Crawford SE,Blutt SE,Speer AL,Estes MK,Ramani S

Year 2024

Species Human

Dilution 1:1,500

View more WB references on thermofisher.com

Immunohistochemistry (34)

United European gastroenterology journal

Lymphocytic colitis can be transcriptionally divided into channelopathic and inflammatory lymphocytic colitis.

"32-5600 was used in Immunohistochemistry to define an lymphocytic colitis LC-specific mucosal transcriptome to gain insight into LC pathology, identify unique genomic signatures, and uncover potentially druggable disease pathways."

Authors: Bhardwaj A,Münch A,Montague J,Koch S,Rosenstiel P,Escudero-Hernández C

Year 2024

Species Human

Scientific reports

Mechanistic study on the alleviation of postmenopausal osteoporosis by Lactobacillus acidophilus through butyrate-mediated inhibition of osteoclast activity.

"32-5600 was used in Immunohistochemistry to identify key probiotics and their metabolites that affect bone loss in PMOP through 16srDNA sequencing combined with non-targeted metabolomics sequencing, and explore the impact and possible mechanisms of key probiotics and their metabolites on the progression of PMOP in the context of osteoporosis caused by estrogen deficiency."

Authors: Dong J,Shu G,Yang J,Wang B,Chen L,Gong Z,Zhang X

Year 2024

Species Human

View more IHC references on thermofisher.com

More applications with references on thermofisher.com

IHC (P) (9) **IHC (F) (2)** **ICC/IF (31)** **Flow (1)** **ELISA (2)** **IP (1)** **Misc (9)**