Anti-Claudin 18.2 Antibody [PSH18-20]

HA601432

Product Type:	Recombinant Mouse monoclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	IHC-P
Molecular Wt:	Predicted band size: 28 kDa
Clone number:	PSH18-20

Description: CLDN-18 has two isoforms, CLDN-18.1 and CLDN-18.2, that are expressed mainly in normal lung and gastric tissues, respectively. CLDN-18 is expressed in many neoplasias, such as gastric and gastroesophageal junction (G/GEJ) cancer, pancreatic cancer, head and neck cancer and non-small cell lung cancer. Different therapeutic drugs targeting CLDN-18.2 for cancer immunotherapy have now been developed and IHC for CLDN-18.2 to be used for the selection of patients to be offered anti-CLDN18.2 treatment. The distinction and scoring criteria separating CLDN-18.2 positive cancers versus negative cancers depend on tumour type and therapeutic agent. For G/GEJ cancer a moderate to strong (2+/3+) positive membrane staining in ≥75% of tumor cells should be considered as the standard cut-off for a CLDN18.2-positive tumor to be treated with zolbetuximab (VYLOY™, Astellas). CLDN-18.2 has a very limited expression in normal tissues and is exclusively expressed in the mucosal membrane of differentiated gastric epithelial cells complicating the design of guidelines for composition of control material for CLDN-18.2 IHC. The gastric epithelial cells will typically show a moderate to strong membranous staining reaction and thus mainly applicable to confirm “right IHC assay” being applied. No staining reaction should be seen in e.g. smooth muscle cells, lymphocytes and endothelial cells enabling these structures to be used as negative tissue controls. Gastric intestinal metaplasia is reported and shown to have a reduced CLDN-18.2 expression and potential to be used as immunohistochemical critical assay performance control (iCAPC) with emphasis on low level demonstration of CLDN-18.2. Gastric intestinal metaplastic epithelial cells (either as external tissue control or internally in patient sample) will typically show a weak to moderate staining reaction. At present internal NordiQC testing has revealed that the presence of gastric intestinal metaplasia is very focal and heterogeneously observed compromising the use for iCAPC in external tissue controls.

Immunogen:	Recombinant protein.
Positive control:	Human stomach cancer tissue.
Subcellular location:	Cell junction, tight junction, Lateral cell membrane.
Database links:	SwissProt: P56856-2 Human
Recommended Dilutions:	
IHC-P	1:50-1:200
Storage Buffer:	PBS (pH7.4), 0.1% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

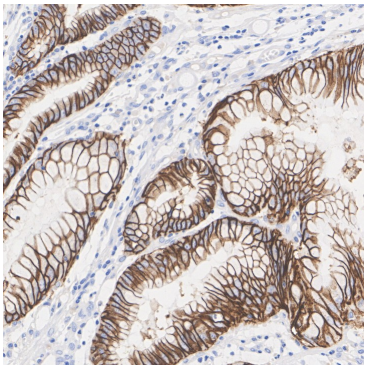

Fig1: Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue with Mouse anti-Claudin 18.2 antibody (HA601432) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601432) at 1/50 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

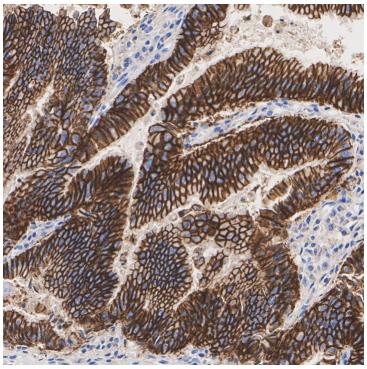

Fig2: Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue with Mouse anti-Claudin 18.2 antibody (HA601432) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601432) at 1/50 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

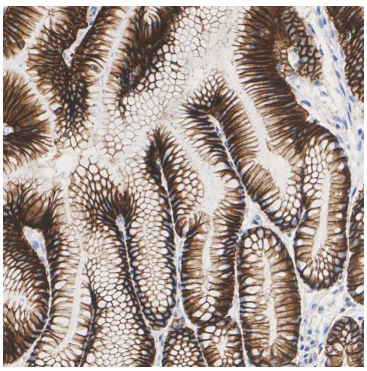

Fig3: Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue with Mouse anti-Claudin 18.2 antibody (HA601432) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601432) at 1/50 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

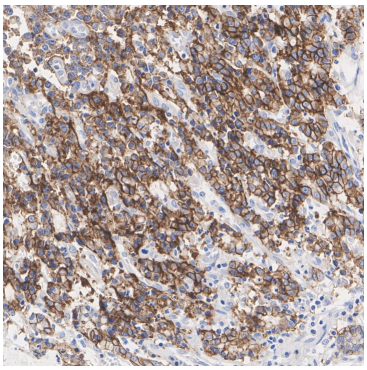

Fig4: Immunohistochemical analysis of paraffin-embedded human stomach cancer tissue with Mouse anti-Claudin 18.2 antibody (HA601432) at 1/50 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA601432) at 1/50 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Nakayama I et al. Claudin 18.2 as a novel therapeutic target. Nat Rev Clin Oncol. 2024 May
2. Kubota Y et al. Comprehensive clinical and molecular characterization of claudin 18.2 expression in advanced gastric or gastroesophageal junction cancer. ESMO Open. 2023 Feb