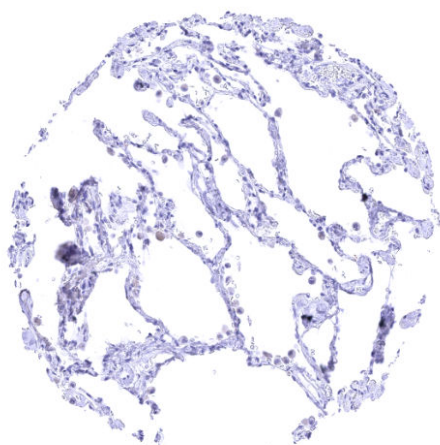


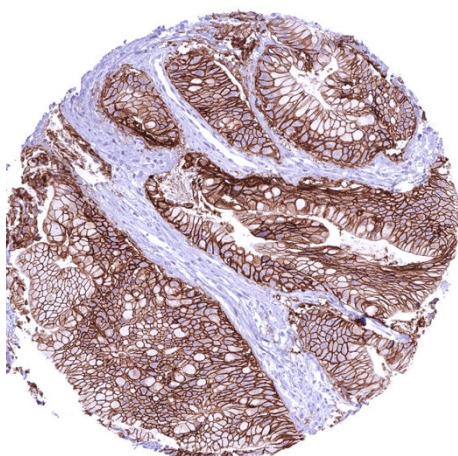
## Anti- Claudin 18.2 Antibody HMV4729 / Recombinant Rabbit monoclonal

|                    |                                            |
|--------------------|--------------------------------------------|
| Human SwissProt    | P56856                                     |
| Human Gene Symbol  | CLDN18                                     |
| Synonyms           | Claudin 18, SFTA5, SFTPJ                   |
| Specificity        | CLDN18                                     |
| Immunogen          | Recombinant fragment of human Claudin 18.2 |
| Isotype            | Rabbit / IgG                               |
| Species Reactivity | Human                                      |

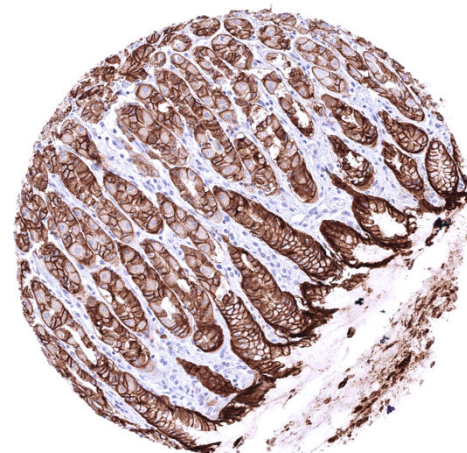
|                     |                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Localization        | Membranous                                                                                                                                                                                                                                 |
| Storage & Stability | Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.                                                                                 |
| Supplied As         | Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC. |
| Positive Control    | Stomach: A strong membranous CLDN18.2 staining must be seen in all gastric epithelial cells.                                                                                                                                               |
| Negative Control    | Lung: CLDN18.2 staining must not be seen in pneumocytes.                                                                                                                                                                                   |



Lung tissue lacking CLDN18.2 positivity of pneumocytes.



Pancreatic ductal adenocarcinoma with strong membranous CLDN18.2 staining of all tumor cells.



Stomach (corpus) with distinct, membranous CLDN18.2 positivity of all epithelial cell types.

### Biology

Claudin 18.2 (CLDN18.2) is one of at least 26 members of the claudin family of membrane proteins that are crucial components of tight junctions, regulating paracellular permeability and maintaining cell polarity in epithelial and endothelial cells. CLDN18.2, is a 28 kDa splice variant coded by the CLDN18 gene on chromosome 3q22.3, which – in normal tissues – is exclusively expressed in gastric epithelial cells. This contrasts with CLDN18.1 which is expressed in pneumocytes of the lung. CLDN18.2 plays a crucial role in the barrier and selective permeability of the tight junctions in gastric epithelial cells by controlling the passage of ions such as Na<sup>+</sup> and H<sup>+</sup>. CLDN18 knockdown mice develop severe gastritis within days. Because of its membranous location, CLDN18.2 is a suitable therapeutic target in cancer. CLDN18.2 expression occurs in significant fractions in gastric and pancreatic adenocarcinomas, and it can also be found in other cancer types. In healthy gastric epithelium, CLDN18.2 is confined to intercellular membranes, rendering it inaccessible to antibody binding. Changes in cell polarity occurring during malignant transformation expose CLDN18.2 on the tumor cell surface, allowing its recognition by therapeutic antibodies. The monoclonal CLDN18.2 antibody Zolbetuximab induces antibody-dependent cellular cytotoxicity and inhibits tumor growth in CLDN18.2 expressing cancers. It has been FDA approved for patients with locally advanced or metastatic gastric or gastroesophageal junction adenocarcinoma with high expression of CLDN18.2. Various other drugs targeting CLDN18.2 are being evaluated in clinical trials.

### Potential Research Applications

- What approach (antibodies, ADCs, others) works best for targeting CLDN18.2 positive cancers?
- What is the prevalence of CLDN18.2 expression in different cancer types?
- Can CLDN18.2 IHC be used as a diagnostic marker for gastric/pancreatic cancer?
- What is the best approach to predict response to current and future anti-CLDN18.2 drugs?

### Protocol Suggestions

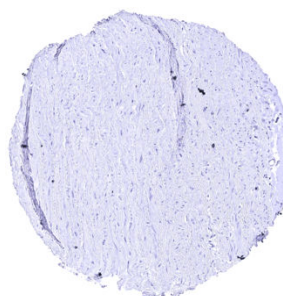
**Dilution: 1:100 – 1:200 ; pH 7,8 is optimal.** Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

### Limitations

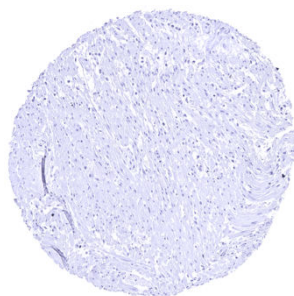
This antibody is available for **research use only** and is not approved for use in diagnostics.

### Warranty

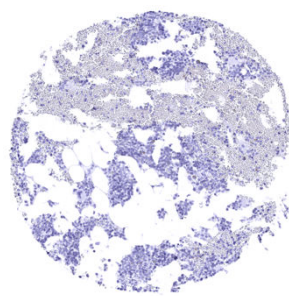
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



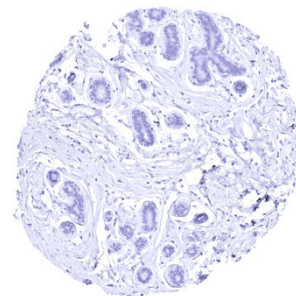
Aorta, media



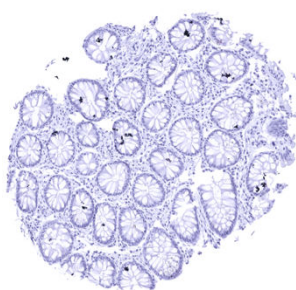
Appendix, muscular wall



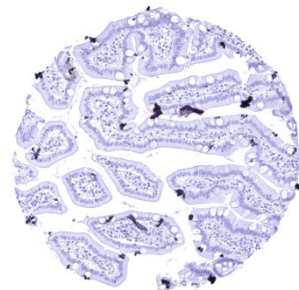
Bone marrow



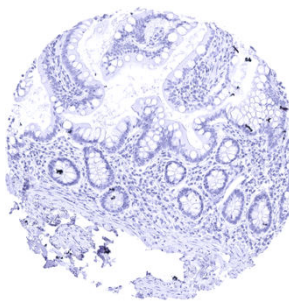
Breast



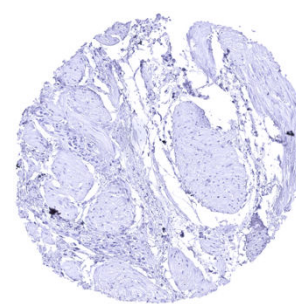
Colon descendens, mucosa



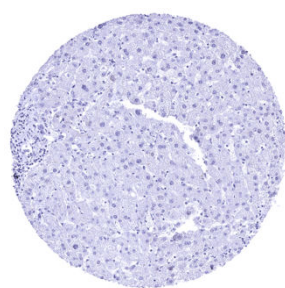
Duodenum, mucosa



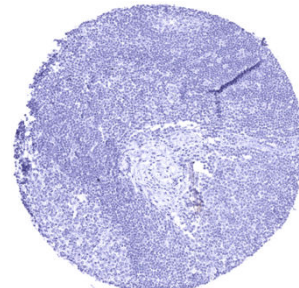
Ileum, mucosa



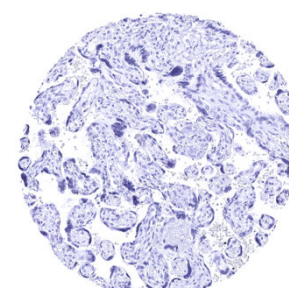
Kidney, pelvis, muscular wall



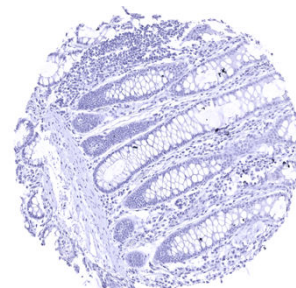
Liver



Lymph node



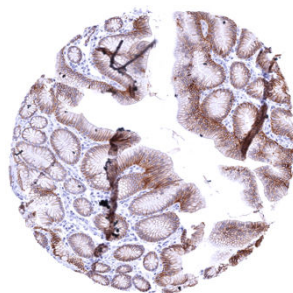
Placenta, mature



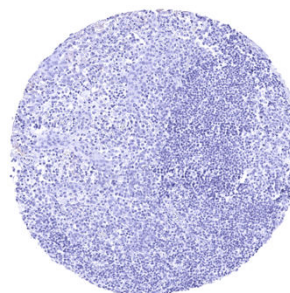
Rectum, mucosa



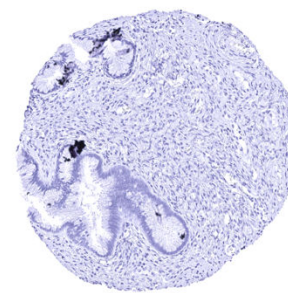
Stomach, antrum – Distinct, membranous CLDN18.2 positivity of all epithelial cell types.



Stomach, antrum – Distinct, membranous CLDN18.2 positivity of all epithelial cells.



Tonsil



Uterus, endocervix