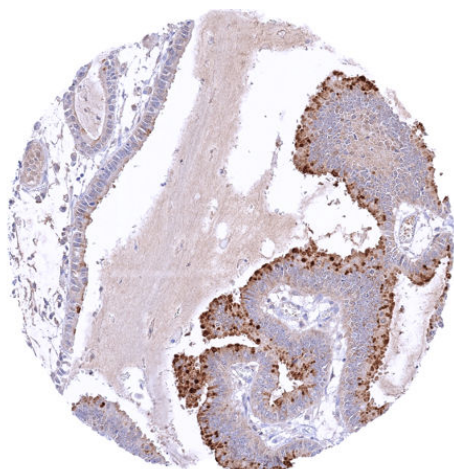


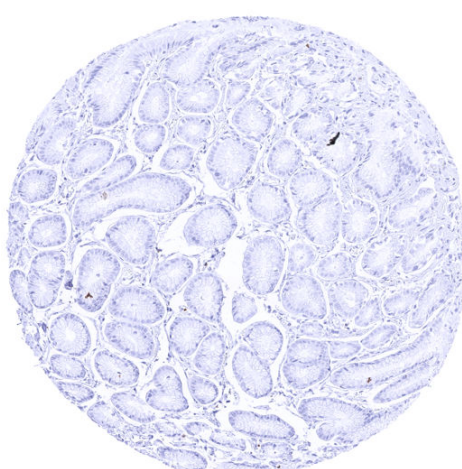
Anti- Pepsinogen-I Antibody HMOV318 / Recombinant Rabbit monoclonal

Human SwissProt	F5H842
Human Gene Symbol	PGA3
Synonyms	pepsinogen 5, group I (pepsinogen A) , pepsinogen 3, group I (pepsinogen A) , pepsinogen 4, group I (pepsinogen A) , Pg5
Specificity	Pepsinogen I
Immunogen	Recombinant human PGA3 fragment
Isotype	Rabbit / IgG
Species Reactivity	Human
Localization	Secreted

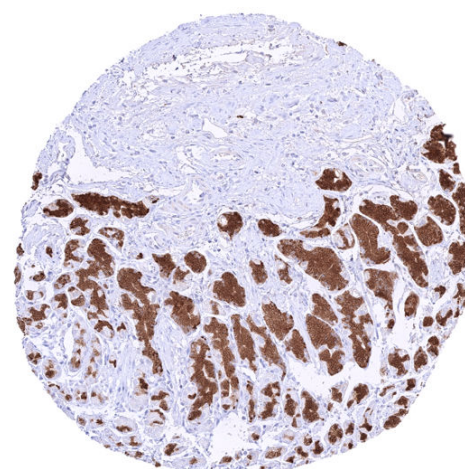
Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. Antibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	Purified antibody from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with <1% BSA & <0.1% azide. Antibody concentrate is optimized for dilution within dilution range using commercially available antibody diluent for IHC.
Positive Control	Stomach, corpus: A strong pepsinogen-I should be seen in chief cells of the stomach while surface epithelial cells and stroma cells remain negative.
Negative Control	Kidney: Pepsinogen-I staining should be completely absent in all cells.



Gastric adenocarcinoma of the fundic gland type with distinct pepsinogen-I staining of tumor cells



Stomach, antrum – Pepsinogen-I positive chief cells are normally lacking in the antrum of the stomach



Strong pepsinogen-I positivity in chief cells of corpus glands

Biology

Pepsinogen-I is an endopeptidase coded by the PGA3/PGA4/PGA5 genes on chromosome 11q12.13. Pepsinogen-I is one of three main endopeptidases (enzymes cutting proteins in their -central part) in the digestive system, the other two being trypsin and chymotrypsin. Pepsinogen-I is synthesized and secreted by gastric chief cells in the corpus of the stomach. It is activated to pepsin in the gastric lumen by HCl secreted by fundic parietal cells. Pepsin is most active in acidic environments between pH 1.5 to 2.5. Nutritive proteins are degraded by pepsin and other enzymes to a mixture of oligopeptides that enter the duodenum. The activity of pepsins ends when the HCl driven low pH of the enzyme-(food)protein mixture is terminated when gastric contents are mixed with alkaline bile and pancreatic juice in the duodenum. Expression of pepsinogen-I is normally limited to corpus glands and thus represents a characteristic feature of “gastric adenocarcinoma of the fundic gland type (GA-FG)”, a rare, newly recognized gastric carcinoma variant making up for about 2% of gastric cancers and showing a chief cell differentiation of at least a large fraction of tumor cells. Pepsinogen-I was suggested to represent the predominant IHC marker of GA-FG.

Potential Research Applications

- The clinical characteristics of the fundic gland type of gastric cancer are not yet well enough established.
- Whether pepsinogen-I can also occur in non-gastric cancers is unknown.

Protocol Suggestions

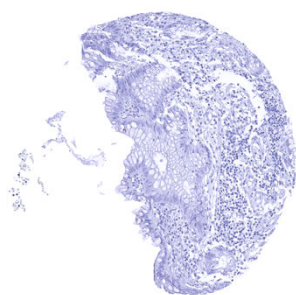
Dilution: 1:100 – 1:200. pH 7,8 is optimal. Freshly cut sections should be used (more than 10 days between cutting and staining deteriorates staining intensity for most antibodies in IHC).

Limitations

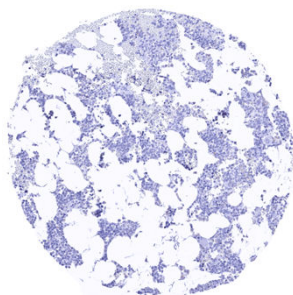
This antibody is available for **research use only** and is not approved for use in diagnostics.

Warranty

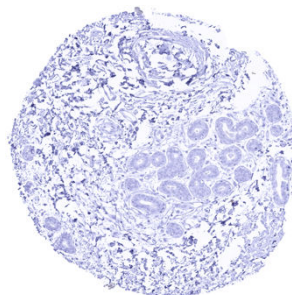
There are no warranties, expressed or implied, which extend beyond this description. MSVA is not liable for any personal injury or economic loss resulting from this product.



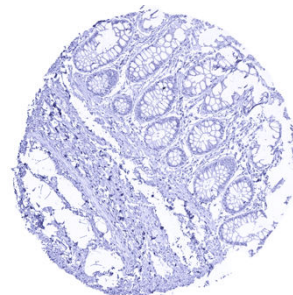
Appendix, mucosa



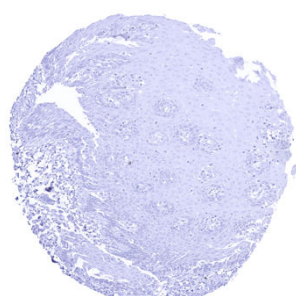
Bone marrow



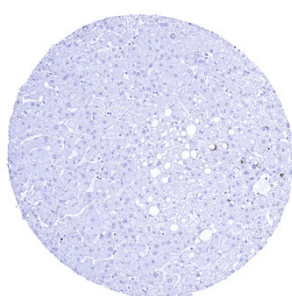
Breast



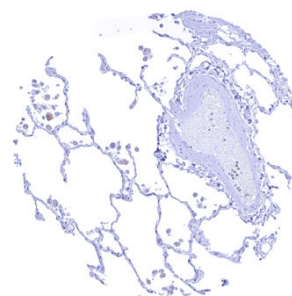
Colon descendens, mucosa



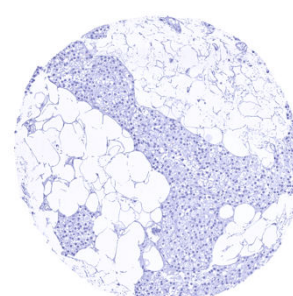
Esophagus, squamous epithelium



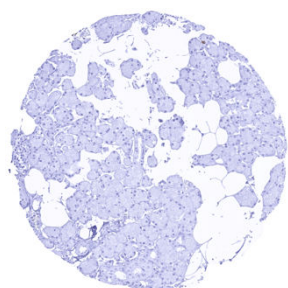
Liver



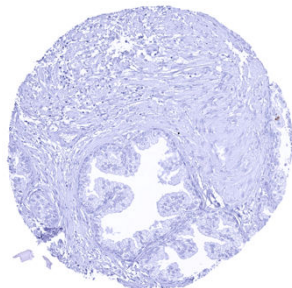
Lung



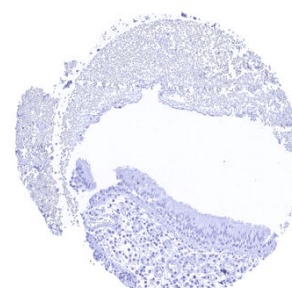
Parathyroid gland



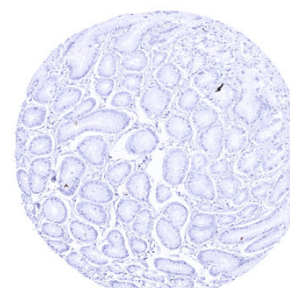
Parotid gland



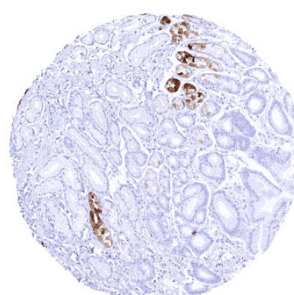
Prostate



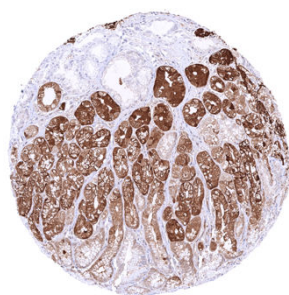
Sinus paranasales



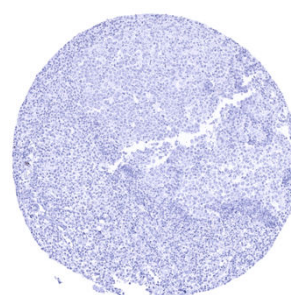
Stomach, antrum – Pepsinogen-I positive chief cells are normally lacking in the antrum of the stomach



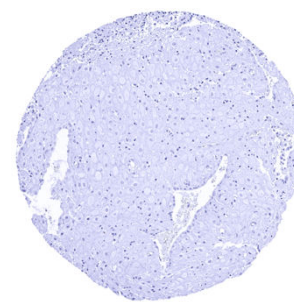
Stomach, antrum – Pepsinogen-I positivity in few glands formed by chief cells in the corpus-antrum transition zone



Stomach, antrum



Tonsil



Uterus, endometrium (pregnancy)