MS Validated Antibodies

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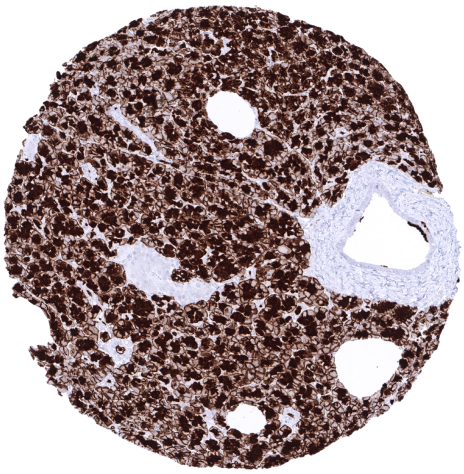
Anti-GP2 Antibody
MSVA-475M / Mouse monoclonal

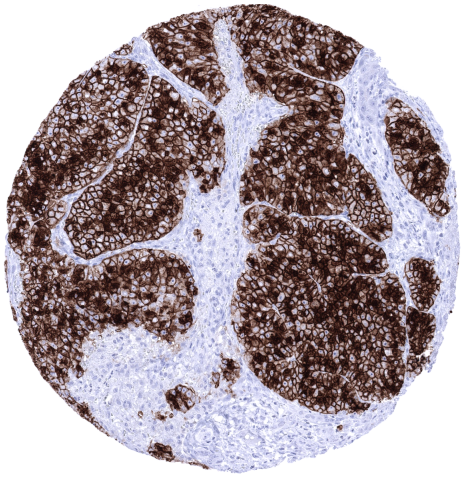
Human SwissProt	P55259
Human Gene Symbol	GP2
Synonyms	Glycoprotein 2 (zymogen granule membrane); GP2; Pancreatic zymogen granule membrane associated protein GP2; Pancreatic zymogen granule membrane protein GP-2; ZAP75
Specificity	HLA-DR
Immunogen	Recombinant fragment of human HLA-DR protein
Isotype	Mouse / IgG
Species Reactivity	Human
Localization	Cell Surface and Secreted

Storage & Stability	Antibody with azide – store at 2 to 8 C. Antibody without azide – store at -20 to -80 C. A ntibody is stable for 24 months. Non-hazardous. No MSD required.
Supplied As	200ug/ml of Ab Purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide.
Positive Control	Pancreas: Acinar cells should show a strong immunostaining with apical predominance. Duodenum: Glandular cells of Brunner glands should show a weak to moderate GP2 positivity.
Negative Control	Colon: GP2 staining should be completely absent in glandular and stromal cells.



Pancreas - A strong GP2 staining is seen in acinar cells of the pancreas. The staining is cytoplasmic and membranous and shows a distinct apical predominance.

Rectum, mucosa - GP2 immunostaining is completely lacking in rectal mucosa.



Pancreas - A strong GP2 immunostaining of all tumor cells in an acinar cell carcinoma of the pancreas

Biology

Pancreatic secretory granule membrane major glycoprotein (GP2) is a 68 kDa protein that in humans is encoded by the GP2 gene at chromosome 16p12.3. GP2 is the most abundant membrane protein found in zymogen granules of the pancreatic acinar cells, and is secreted together with digestive enzymes into the small intestine where it acts as an immunomodulator. The function of GP is poorly understood. GP2 knockout mice develop normally and do not have metabolic impairments, suggesting that this protein is not required for normal pancreas development and function. GP2 is also found on cells in various mucous glands in the murine digestive, respiratory, and genital tracts as well as on M-cells, an enterocyte derived cell-type specialized in the transport of luminal antigens and bacteria across the gut. In normal tissues, a strong cytoplasmatic and membranous GP2 staining occurs in acinar cells of the pancreas. In these cells, the staining often shows an accentuation at the apical membranes. A markedly weaker cytoplasmic GP2 staining with apical membrane predominance occurs regularly in the cytoplasm of duodenal Brunner glands and occasionally in glands of the stomach antrum, in the gallbladder epithelium, serous cells in bronchial glands, and a few endometrial glands. Among tumors, GP2 is expressed in the majority of acinar cell carcinomas of the pancreas. GP2 expression can rarely also be seen in several other tumor entities.

Potential Research Applications

-The diagnostic utility of GP2 IHC should be investigated in a large cohort of tumors from different entities. In particular, its utility as a marker for pancreatic acinar carcinoma should be analyzed.

-The function of GP2 is largely unknown.

-The prognostic role of GP2 expression in cancers is unknown.

-Autoantibodies against GP2 occur in Crohn's disease. The significance of this phenomenon is not understood.

Potential pitfall

Normal pancreatic tissue (strongly positive for GP2) entrapped between tumor cells can be mistaken for tumor cell positivity.

Protocol Suggestions

Dilution: 1:150. pH 7,8 is optimal. Freshly cut sections should be used (less 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. Not for resale without express authorization.

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.

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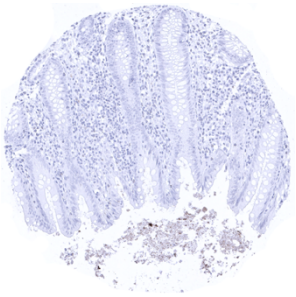
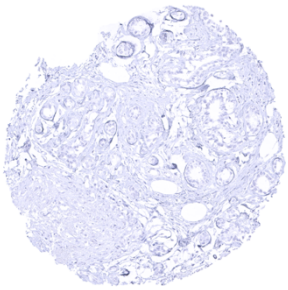
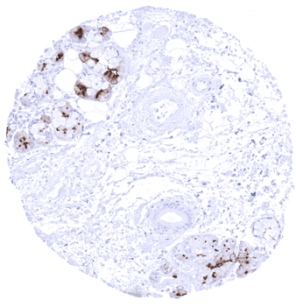


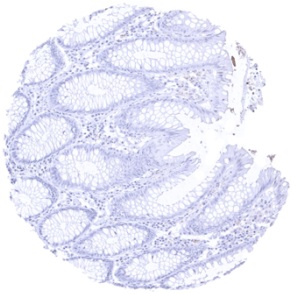
Appendix, mucosa



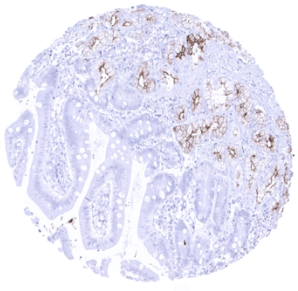
Breast



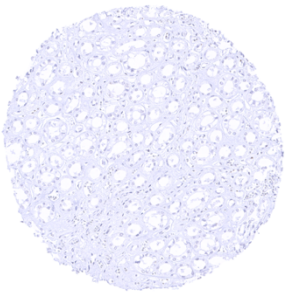
Bronchus, bronchial glands - A weak to moderate GP2 staining occurs in selected cells of bronchial glands. The staining is cytoplasmic but shows a distinct apical predominance



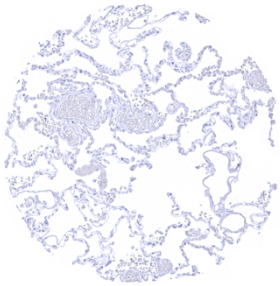
Colon descendens, mucosa



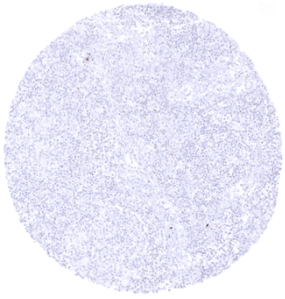
Duodenum, Brunner gland - A weak to moderate GP2 staining occurs in Brunner glands of the duodenum. The staining is cytoplasmic but shows a distinct apical predominance



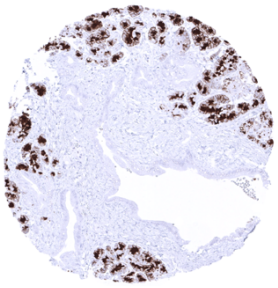
Kidney, medulla



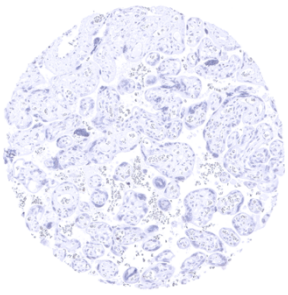
Lung



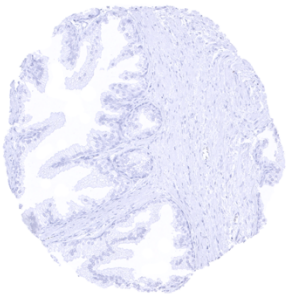
Lymph node



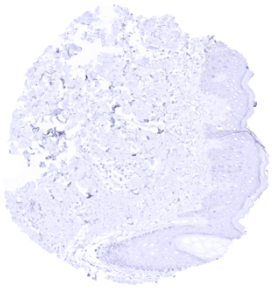
Pancreas - A strong GP2 staining is seen in acinar cells of the pancreas. GP2 staining is lacking in pancreatic ducts



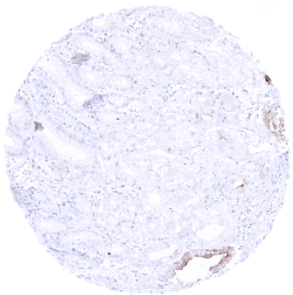
Placenta, mature



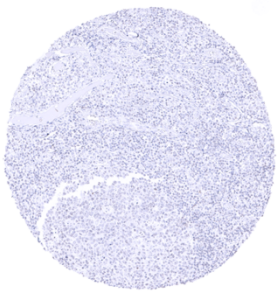
Prostate



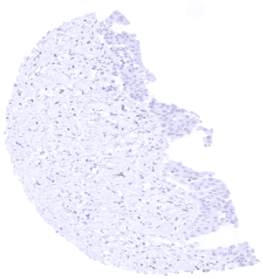
Skin



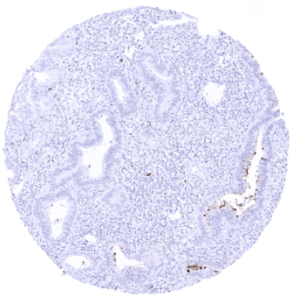
Stomach, antrum - A weak to moderate GP2 staining can occurs in some gland of the stomach antrum. The staining is cytoplasmic and shows a distinct predominance at the apical membrane



Tonsil



Urinary bladder, urothelium



Uterus, endometrium (secretion) - A weak to moderate GP2 staining can occur in few endometrial glands. The staining is predominantly located at the apical membrane