GP2 Antibody for IHC / Glycoprotein 2 [clone MSVA-475M] (V6081)

Catalog No.	Formulation	Size
V6081-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V6081-20UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	20 ug

Recombinant MOUSE MONOCLONAL

Bulk quote request

Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Recombinant Mouse Monoclonal
Isotype	Mouse IgG2c, kappa
Clone Name	MSVA-475M
UniProt	P55259
Localization	Apical cell membrane, Cell membrane, Endosome, Membrane raft, Secreted, Zymogen granule membrane
Applications	Immunohistochemistry (FFPE) : 1:100-1:200
Limitations	This GP2/Glycoprotein 2 antibody is available for research use only.

GP2 / Glycoprotein 2 Antibody for IHC. Immunohistochemistry analysis of Glycoprotein 2 antibody in human tissue microarrays. Formalin-fixed, paraffin-embedded human tissue microarrays containing multiple normal and cancer tissues were stained using GP2 Antibody for IHC recognizing Glycoprotein 2 (clone MSVA-475M). Strong HRP-DAB brown staining is observed in pancreatic acinar cells, consistent with the known localization of pancreatic secretory granule membrane major glycoprotein GP2 within zymogen granules. Most other normal tissues show little to no detectable staining. In cancer tissues, strong cytoplasmic staining is observed in pancreatic acinar cell carcinoma, while most other tumor types remain negative, supporting the tissue-restricted expression pattern of Glycoprotein 2. The staining distribution observed across these tissues aligns with expression patterns reported in the Human Protein Atlas.

Description

Glycoprotein 2, encoded by the GP2 gene, is a membrane-associated protein best known as the major glycoprotein of pancreatic zymogen granule membranes. GP2 Antibody for IHC recognizes this protein in formalin-fixed tissue sections, enabling visualization of Glycoprotein 2 distribution within pancreatic and epithelial tissues. GP2 is commonly referred to

as pancreatic secretory granule membrane major glycoprotein GP2 and zymogen granule membrane glycoprotein 2, reflecting its well-established localization in secretory granules of pancreatic acinar cells. In immunohistochemistry studies, GP2 expression is typically observed as cytoplasmic and apical staining in pancreatic acinar cells where digestive enzyme-containing granules are concentrated.

GP2 Antibody for IHC clone MSVA-475M supports immunohistochemical analysis of this highly specialized secretory protein. In normal pancreas, Glycoprotein 2 is strongly expressed in acinar cells that produce digestive enzymes, with staining often highlighting the apical region of the cells corresponding to zymogen granules. This distinct staining pattern makes GP2 a useful marker for identifying pancreatic acinar differentiation in tissue sections. Immunohistochemical detection allows researchers and pathologists to evaluate acinar cell identity while maintaining the structural context of the tissue architecture.

Beyond the pancreas, GP2 expression has also been reported in certain epithelial tissues and immune-associated structures. GP2 has been detected on specialized epithelial cells and has been implicated in host-microbe interactions within mucosal environments. In tissue-based analyses, these expression patterns are visualized through membranous or cytoplasmic staining in epithelial cells, reflecting the protein's localization to secretory or membrane-associated compartments. Because immunohistochemistry preserves cellular morphology, GP2 staining can be interpreted in the context of epithelial organization and tissue structure.

GP2 Antibody for IHC is particularly valuable in studies evaluating pancreatic biology and tumor differentiation. In pancreatic research, immunohistochemistry enables direct visualization of Glycoprotein 2 within acinar cells and pancreatic glandular structures. Alterations in GP2 expression may also be examined in pancreatic tumors and other epithelial malignancies where acinar differentiation or secretory pathways are under investigation. The ability to detect GP2-positive cells within intact tissue sections allows investigators to correlate protein expression with histologic features of disease.

As a monoclonal antibody optimized for tissue staining, GP2 Antibody for IHC clone MSVA-475M enables clear visualization of Glycoprotein 2 expression in formalin-fixed, paraffin-embedded specimens. Cytoplasmic and apical staining patterns correspond with the known localization of pancreatic secretory granule membrane major glycoprotein GP2, supporting research applications focused on pancreatic acinar biology, epithelial differentiation, and tissue-based protein localization studies.

This antibody is also part of a broader collection of IHC antibodies validated by tissue microarray analysis, supporting consistent staining across normal and cancer tissues.

Application Notes

1. Optimal dilution of the GP2 antibody for IHC should be determined by the researcher.

2. This GP2/Glycoprotein 2 antibody is recombinantly produced by expression in human HEK293 cells.

3. Manual Protocol: Freshly cut sections should be used (less than 10 days between cutting and staining). Heat-induced antigen retrieval for 5 minutes in an autoclave at 121oC in pH 7.8 Target Retrieval Solution buffer. Apply the antibody at a dilution of 1:150 at 37oC for 60 minutes. Visualization of bound antibody by the EnVision Kit (Dako, Agilent) according to the manufacturer's directions.

Immunogen

A recombinant fragment of human GP2 protein (around amino acids 35-179) (exact sequence is proprietary) was used as the immunogen for the GP2/Glycoprotein 2 antibody.

Storage

GP2/Glycoprotein 2 antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.