MUC5AC Antibody for IHC / Mucin 5AC Immunohistochemistry Antibody [clone MSVA-109M] (V5953)

Catalog No.	Formulation	Size
V5953-100UG	Antibody in 1X PBS with 0.05% BSA, 0.05% sodium azide	100 ug
V5953-20UG	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 IgG1, kappa
Clone Name	MSVA-109M
UniProt	P98088
Localization	Secreted
Applications	Immunohistochemistry (FFPE): 1:100-1:200
Limitations	This MUC5AC Antibody for IHC / Mucin 5AC Immunohistochemistry Antibody is available for research use only.



MUC5AC Antibody for IHC Tissue Microarray (TMA). Immunohistochemistry analysis of Mucin 5AC MUC5AC in formalin-fixed paraffin-embedded human normal and cancer tissue microarrays using recombinant mouse monoclonal MUC5AC antibody clone MSVA-109M. Tissue microarray (TMA) staining with HRP-DAB brown chromogen demonstrates prominent cytoplasmic localization in gastric foveolar epithelium and mucus-secreting epithelial cells, consistent with gastric-type mucin expression, while non-mucinous epithelial tissues and non-epithelial compartments including stromal and mesenchymal tissues show minimal to absent staining. Within tumor tissue microarrays, strong cytoplasmic staining is observed in mucinous and glandular carcinomas, supporting identification of mucin-producing tumor cells and assessment of epithelial differentiation. Evaluation across large TMA panels enables direct comparison of MUC5AC expression across diverse tissue types under standardized conditions. The observed staining patterns align with reported MUC5AC expression profiles in publicly available datasets including the Human Protein Atlas.

Description

Mucin 5AC (MUC5AC) is a secreted gel-forming mucin predominantly expressed in gastric foveolar epithelium, where it contributes to mucosal protection, epithelial barrier integrity, and lubrication of the gastrointestinal surface. MUC5AC Antibody for IHC is specifically optimized for detection of gastric-type mucin expression in formalin-fixed, paraffin-embedded tissues, enabling high-contrast visualization of mucin-producing epithelial cells and mucin-associated tumor phenotypes in histological sections.

MUC5AC antibody, also referred to as Mucin 5AC antibody or gastric mucin antibody, is widely used in immunohistochemistry as a marker of gastric differentiation and mucinous epithelial lineage. In IHC staining, MUC5AC is typically observed as strong cytoplasmic and luminal HRP-DAB brown signal within mucus-secreting epithelial cells, particularly in gastric mucosa and subsets of respiratory and gastrointestinal epithelium. Non-mucinous epithelial tissues and non-epithelial compartments such as stroma, muscle, and lymphoid tissue show minimal to absent staining, supporting its specificity for mucin-producing cell populations.

Clone MSVA-109M is a recombinant mouse monoclonal antibody developed for high-affinity and reproducible detection of MUC5AC in FFPE samples. This clone produces strong, well-defined cytoplasmic staining with low non-specific background under standard antigen retrieval conditions, enabling clear identification of mucin-producing cells within complex tissue architecture. In Tissue Microarray (TMA) analysis, MUC5AC Antibody for IHC demonstrates highly consistent staining across large panels of normal and cancer tissues, allowing direct comparison of mucin expression patterns across hundreds of tissue cores within a single experimental setting.

In normal tissue microarrays, MUC5AC expression is prominently detected in gastric surface epithelium and mucus-secreting glands, where intense staining highlights foveolar cells and luminal mucin. Additional expression may be observed in select respiratory epithelial cells, reflecting mucin production in airway tissues. Most other tissues, including mesenchymal and non-mucinous epithelial compartments, remain largely negative, reinforcing the lineage specificity of MUC5AC in immunohistochemistry.

In cancer tissue microarrays, MUC5AC Antibody for IHC reveals strong cytoplasmic staining in a wide range of mucinous and glandular carcinomas, including gastric adenocarcinoma, colorectal adenocarcinoma, pancreatic adenocarcinoma, lung adenocarcinoma, and ovarian mucinous tumors. Tumor cells frequently exhibit increased staining intensity and expanded distribution compared to normal tissues, reflecting dysregulated mucin expression and altered differentiation states during malignant transformation. This staining pattern is particularly valuable for identifying mucinous differentiation, supporting tumor classification, and distinguishing epithelial tumor subtypes in diagnostic and research settings.

The robust and reproducible staining performance of clone MSVA-109M in TMA-based immunohistochemistry supports its application in cancer research, tumor profiling, and studies of epithelial differentiation. MUC5AC Antibody for IHC enables reliable detection of mucin-producing cells in FFPE tissues and is well suited for high-throughput tissue microarray analysis, comparative pathology, and evaluation of mucin-associated tumor biology across diverse tissue types.

For broader research on MUC5AC expression in gastric and respiratory mucus, including the widely published 45M1 clone, see our MUC5AC Antibody 45M1 / Gastric and Respiratory Mucin Marker page.

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 MUC5AC Antibody for IHC / Mucin 5AC Immunohistochemistry Antibody should be determined by the researcher.

2. This Mucin 5AC/MUC5AC antibody is recombinantly produced by expression in CHO 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

Recombinant full-length human MUC5AC protein was used as the immunogen for the Mucin 5AC/MUC5AC antibody.

Storage

Mucin 5AC/MUC5AC antibody with sodium azide - store at 2 to 8oC; antibody without sodium azide - store at -20 to -80oC.

Alternate Names

MUC5AC IHC antibody, Mucin 5AC immunohistochemistry antibody, Gastric mucin antibody, MUC5AC TMA antibody, Mucin 5AC tissue staining antibody

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