Foveolar Mucin Antibody / MUC5AC [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 Foveolar Mucin/MUC5AC antibody is available for research use only.
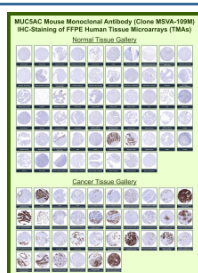
Immunohistochemistry analysis of Foveolar Mucin / MUC5AC antibody (clone MSVA-109M) in human tissue microarrays. Recombinant Foveolar Mucin / MUC5AC antibody (clone MSVA-109M) was evaluated on FFPE human normal and cancer tissue microarrays, demonstrating cytoplasmic brown chromogenic staining in gastric foveolar epithelium and mucin-producing epithelial tumors consistent with known MUC5AC expression patterns, while most non-mucinous tissues show minimal staining. The observed staining distribution across normal and malignant specimens aligns with publicly available protein expression data.

Description

Foveolar Mucin antibody targets Mucin 5AC, a secreted gel-forming mucin encoded by the human MUC5AC gene and a principal component of the gastric surface mucus layer. Mucin 5AC, also widely referred to as MUC5AC in molecular biology literature, is the dominant mucin produced by gastric foveolar epithelial cells lining the stomach surface and pits. Because of this restricted localization, Foveolar Mucin antibody and MUC5AC antibody are commonly used interchangeably in pathology to evaluate gastric epithelial differentiation and mucin phenotype in tissue sections.

MUC5AC is synthesized as a large, heavily O-glycosylated secreted glycoprotein that polymerizes to form the viscoelastic

mucus barrier protecting the gastric mucosa from acid and digestive enzymes. In normal stomach tissue, Mucin 5AC expression is localized to the apical cytoplasm and secretory granules of surface foveolar cells. In contrast, intestinal goblet cells predominantly express MUC2, making Foveolar Mucin antibody particularly useful for distinguishing gastric-type from intestinal-type differentiation in gastrointestinal pathology.

Aberrant expression of MUC5AC has been documented in gastric carcinoma, pancreatic adenocarcinoma, colorectal carcinoma with gastric differentiation, and certain ovarian and lung tumors. Altered Foveolar mucin expression patterns are also observed in chronic gastritis, intestinal metaplasia, and Barrett esophagus. Foveolar Mucin antibody is therefore valuable for immunohistochemical evaluation of gastric lineage differentiation and mucinous tumor subtyping in research applications.

Structurally, Mucin 5AC contains extensive tandem repeat domains enriched in serine and threonine residues that support dense O-glycosylation, along with cysteine-rich domains responsible for mucin polymerization and gel formation. A Foveolar Mucin antibody such as clone MSVA-109M is suitable for detecting MUC5AC expression in gastric epithelium and mucinous tumors in research settings.

Application Notes

1. Optimal dilution of the Foveolar Mucin/MUC5AC antibody should be determined by the researcher.

2. This recombinant Foveolar Mucin/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 Foveolar Mucin/MUC5AC antibody.

Storage

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