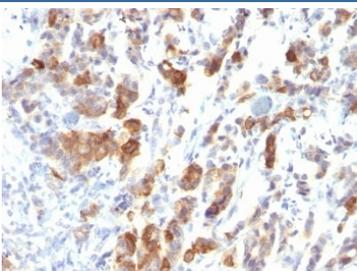


MUC5AC Antibody / Mucin 5AC [clone MUC5AC/917] (V2738)

Catalog No.	Formulation	Size
V2738-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2738-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2738SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V2738IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

[Bulk quote request](#)

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	MUC5AC/917
Purity	Protein G affinity chromatography
UniProt	P98088
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 min at RT
Limitations	This MUC5AC antibody is available for research use only.



Immunohistochemistry analysis of MUC5AC in human gastric carcinoma tissue. Formalin-fixed, paraffin-embedded human gastric carcinoma tissue was stained using MUC5AC antibody (clone MUC5AC/917), showing cytoplasmic and luminal staining in tumor epithelial cells, consistent with mucin expression in gastric-type epithelium. Heat-mediated antigen retrieval was performed by boiling sections in pH 9 Tris-EDTA buffer for 10-20 minutes, followed by cooling at room temperature for 20 minutes. Detection was achieved using an HRP-based system with DAB chromogen, with hematoxylin counterstain.

Description

MUC5AC antibody targets Mucin 5AC, a high molecular weight gel forming mucin encoded by the MUC5AC gene that plays a central role in the formation of protective mucus barriers on epithelial surfaces. Mucin 5AC is a member of the secreted mucin family and is characterized by extensive O-linked glycosylation, which contributes to its viscoelastic properties and ability to trap particles, pathogens, and environmental irritants. MUC5AC is primarily expressed by mucin producing epithelial cells in tissues such as the respiratory tract, gastrointestinal tract, and other mucosal surfaces, where it supports barrier integrity and surface lubrication.

At the cellular level, Mucin 5AC is synthesized in the endoplasmic reticulum and Golgi apparatus of epithelial cells and is stored in secretory granules prior to regulated secretion into the extracellular space. Once released, MUC5AC polymerizes to form a gel like mucus layer that overlays epithelial surfaces. This mucus layer functions as a first line of defense by limiting direct contact between epithelial cells and potentially harmful agents. MUC5AC antibody reagents enable investigation of mucin production, secretion dynamics, and epithelial barrier organization in research settings focused on mucosal biology.

MUC5AC expression is tightly regulated and varies depending on tissue type, developmental stage, and environmental stimuli. In the respiratory tract, MUC5AC is produced by goblet cells and contributes to airway mucus composition. In the gastrointestinal tract, its expression supports lubrication and protection of the epithelial lining. Changes in MUC5AC expression levels or distribution can reflect alterations in epithelial differentiation, secretory activity, or responses to inflammatory signals. As such, MUC5AC antibody tools are widely used to study epithelial cell identity and mucin regulation under both physiological and disease associated conditions.

Structurally, Mucin 5AC contains large central domains rich in serine and threonine residues that serve as sites for extensive glycosylation, flanked by cysteine rich regions involved in polymer formation. These structural features allow MUC5AC molecules to assemble into large mucin networks that confer the characteristic gel forming properties of mucus. Regulation of MUC5AC structure and secretion may involve transcriptional control, post-translational modifications, and cellular signaling pathways that influence mucin biosynthesis and release. Use of a MUC5AC antibody supports research into these molecular mechanisms and their impact on epithelial barrier function.

From a disease relevance perspective, altered MUC5AC expression has been investigated in conditions involving mucus dysregulation and epithelial remodeling. Changes in mucin production are often associated with chronic inflammatory states and epithelial stress, where excessive or aberrant mucus accumulation can influence tissue function. In pathology and biomedical research, analysis of MUC5AC expression provides insight into mucosal differentiation patterns, epithelial secretory phenotypes, and disease related changes in mucus composition. MUC5AC antibody reagents therefore serve as valuable tools for examining mucin biology and epithelial responses in a variety of research contexts.

Monoclonal MUC5AC antibody clone MUC5AC/917 is designed to recognize Mucin 5AC and supports consistent detection of MUC5AC expression in relevant biological samples. MUC5AC antibody clone MUC5AC/917 provides a research tool for studying mucin expression, epithelial differentiation, and mucus barrier organization, with NSJ Bioreagents supplying antibodies intended for research use.

Application Notes

1. Optimal dilution of the MUC5AC antibody should be determined by the researcher.
2. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant human partial protein was used as the immunogen for the MUC5AC antibody.

Storage

Store the MUC5AC antibody at 2-8°C (with azide) or aliquot and store at -20°C or colder (without azide).