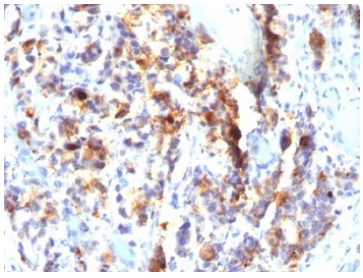
Mucin 5AC Antibody SPM297 / Goblet Cell Mucin Marker [clone SPM297] (V9051)

Catalog No.	Formulation	Size
V9051-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V9051-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V9051SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V9051IHC-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	SPM297
Purity	Protein G affinity chromatography
UniProt	P98088
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This Mucin 5AC Antibody SPM297 / Goblet Cell Mucin Marker is available for research use only.



Mucin 5AC Antibody SPM297 in Human Gastric Carcinoma IHC. Immunohistochemistry staining of FFPE human gastric carcinoma tissue with Mucin 5AC Antibody SPM297 / Goblet Cell Mucin Marker, clone SPM297. Positive staining demonstrates MUC5AC expression in gastric carcinoma cells, supporting detection of this mucin marker in human tumor tissue.

Description

Mucin 5AC Antibody SPM297 / Goblet Cell Mucin Marker detects MUC5AC, a large secreted gel-forming mucin produced by specialized mucus-secreting epithelial cells. MUC5AC is abundant in gastric and respiratory mucosa, where it contributes to hydrated mucus barriers that protect epithelial surfaces. Extensive glycosylation gives MUC5AC many of the physical properties required for mucus viscosity, lubrication and resistance to chemical, microbial and environmental injury.

MUC5AC is prominently expressed by surface and foveolar epithelial cells of the stomach. Secreted MUC5AC contributes to the gastric mucus layer that protects underlying epithelial cells from acid, digestive enzymes and mechanical damage. In the respiratory tract, MUC5AC is associated with mucus-producing goblet cells and contributes to trapping inhaled particles and microorganisms. These expression patterns make MUC5AC a useful goblet cell mucin marker for studies of secretory epithelial differentiation and mucosal barrier biology.

Changes in MUC5AC production are investigated in gastrointestinal and respiratory disease. Airway expression can increase in response to inflammatory cytokines, allergens, infection and environmental irritants, and excessive MUC5AC production is associated with mucus hypersecretion. The protein is therefore studied in asthma, chronic bronchitis and chronic obstructive pulmonary disease, as well as in research examining goblet cell hyperplasia and epithelial remodeling.

MUC5AC expression is also investigated in epithelial cancers. Altered expression or localization can occur in gastric carcinoma and other tumors exhibiting mucinous differentiation. Analysis of MUC5AC alongside other mucin and epithelial markers can help characterize secretory phenotypes and changes in tissue differentiation associated with neoplastic transformation.

Clone SPM297 is a mouse monoclonal antibody generated using an M1 mucin preparation from ovarian mucinous cyst fluid. It recognizes the peptide core of gastric mucin M1, now identified as MUC5AC. The recognized epitope is sensitive to beta-mercaptoethanol and protease treatment but resistant to periodate treatment. The antibody has been evaluated by immunohistochemistry in FFPE human gastric carcinoma tissue. NSJ Bioreagents supplies antibodies for mucin, epithelial and cancer research. A Mucin 5AC Antibody can be used to investigate goblet cells, mucus secretion, gastric mucin biology and MUC5AC-associated epithelial differentiation.

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.

Application Notes

The optimal dilution of the Mucin 5AC Antibody SPM297 / Goblet Cell Mucin Marker for each application should be determined by the researcher.

1. Staining of formalin-fixed tissues requires boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 minutes.

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.

3. This mAb recognizes the peptide core of gastric mucin M1 (>1,000kDa) (recently identified as Mucin 5AC). Its epitope is destroyed by beta-mercaptoethanol and proteases but not by periodate treatment.

Immunogen

An M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le(a-b) patient was used as the immunogen for this Mucin 5AC Antibody SPM297.

Storage

Store the Mucin 5AC Antibody SPM297 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

Mucin 5AC antibody, Goblet Cell Mucin Marker antibody, MUC5AC antibody, Mucin-5AC antibody, Gastric Mucin antibody

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