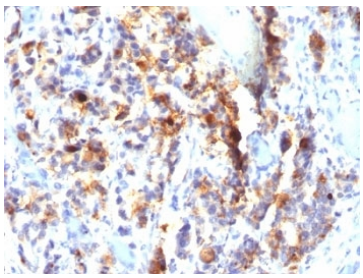
Mucin-5AC Antibody / MUC5AC [clone SPM297] (V9051)

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-5ACantibody is available for research use only.



IHC: Formalin-fixed, paraffin-embedded human gastric carcinoma stained with Mucin-5AC antibody (SPM297).

Description

Mucin-5AC antibody detects Mucin 5AC, a gel-forming mucin encoded by the MUC5AC gene. Mucin 5AC is secreted by goblet cells in the respiratory and gastrointestinal tracts, where it forms part of the protective mucous barrier. Because Mucin 5AC is overexpressed in gastric and lung carcinomas and in chronic airway diseases, Mucin-5AC antibody is a vital tool in oncology, gastroenterology, and pulmonary biology.

Mucin 5AC is a large, heavily glycosylated protein that provides viscosity and protective properties to epithelial secretions. In healthy tissue, it contributes to mucosal defense by trapping pathogens and particles. In pathology, its overproduction or mislocalization contributes to cancer progression, asthma, and chronic obstructive pulmonary disease. Its expression patterns provide diagnostic and prognostic information across multiple conditions.

The Mucin-5AC antibody clone SPM297 provides specific and reproducible recognition. Clone SPM297 has been cited in peer-reviewed studies examining gastric carcinoma, lung adenocarcinoma, and airway inflammation. Its applications include immunohistochemistry, Western blotting, and immunofluorescence, where accurate detection of mucins is required.

Research using clone SPM297 has demonstrated how Mucin 5AC expression distinguishes mucinous gastric carcinoma from other tumor types, aiding in differential diagnosis. In pulmonary biology, this antibody has clarified how goblet cell hyperplasia contributes to mucus overproduction in chronic lung disease. Beyond pathology, studies have explored MUC5AC regulation by inflammatory cytokines, linking it to epithelial remodeling and immune responses. Its reproducibility ensures reliable results across different model systems.

NSJ Bioreagents supplies this Mucin-5AC antibody to support oncology, pulmonary biology, and gastrointestinal research. Alternate designations include MUC5AC antibody, gastric mucin 5AC antibody, respiratory tract mucin antibody, epithelial goblet cell marker antibody, secreted mucin protein antibody, and airway disease marker antibody.

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.

Application Notes

The optimal dilution of the Mucin-5AC antibody 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.

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.

Storage

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