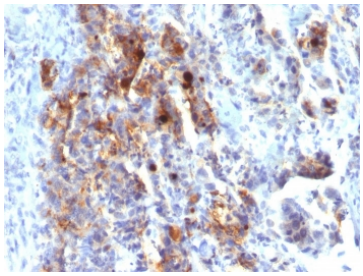
MUC5AC Antibody [clone 45M1] (V8591BTN)

Catalog No.	Formulation	Size
V8591BTN	1 mg/ml with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V8591BTN-20UG	0.2 mg/ml with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V8591BTN-SAF100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Biotin Conjugate
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	45M1
Purity	Protein G affinity chromatography
UniProt	P98088
Localization	Cytoplasmic
Applications	Immunohistochemistry (FFPE) : 1-2ug/ml for 30 minutes at RT
Limitations	This biotinylated MUC5AC antibody is available for research use only.



IHC staining of FFPE human gastric carcinoma with biotinylated MUC5AC antibody (clone 45M1). HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 20 min and allow to cool before testing.

Description

MUC5AC antibody detects mucin 5AC, a gel-forming glycoprotein encoded by the MUC5AC gene. MUC5AC is secreted

by goblet cells in the respiratory and gastrointestinal tracts, where it contributes to the protective mucous barrier. Because MUC5AC is overexpressed in many epithelial cancers and respiratory diseases, MUC5AC antibody is an important reagent in oncology, pulmonary biology, and gastroenterology.

MUC5AC is a large polymeric mucin with extensive glycosylation that provides viscosity and protective properties. In normal physiology, it lubricates and protects epithelial surfaces against pathogens and mechanical stress. In pathology, MUC5AC is upregulated in conditions such as asthma, chronic obstructive pulmonary disease, and gastric carcinoma, where it contributes to altered barrier function and disease progression.

The MUC5AC antibody clone 45M1 is supplied here in a biotin-conjugated format, enabling direct use with streptavidin-based detection systems. Clone 45M1 has been referenced in peer-reviewed studies of gastric pathology, airway inflammation, and tumor biology. Its versatility makes it suitable for immunohistochemistry, ELISA, and other biotin-based detection platforms requiring precise localization of mucin proteins.

Research using clone 45M1 has highlighted how MUC5AC expression distinguishes mucinous carcinomas from other tumor types, aiding in diagnostic pathology. In pulmonary research, detection of MUC5AC has clarified how goblet cell hyperplasia and mucin overproduction contribute to chronic airway disease. This antibody has also been valuable in developmental biology studies of mucin gene regulation and epithelial differentiation.

NSJ Bioreagents provides this MUC5AC antibody in a biotin-conjugated format to support oncology, pulmonary biology, and gastrointestinal research. Alternate designations include MUC5AC protein antibody, mucin 5AC antibody, gastric mucin antibody, respiratory tract mucin antibody, epithelial secretory mucin antibody, and MUC5AC gene product antibody.

This MAb recognizes the peptide core of gastric mucin M1 (recently identified as Mucin 5AC). Its epitope is located in the C-terminal cysteine rich part of the peptide core of MUC5AC. Its epitope is destroyed by beta-mercaptoethanol but not by periodate treatment.

Application Notes

Optimal dilution of the biotinylated MUC5AC antibody should be determined by the researcher.

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 the biotinylated MUC5AC antibody.

Storage

Store the biotinylated MUC5AC antibody at 2-8oC (up to one month) or aliquot and store at -20oC (longer term).