MUC5AC Antibody 1-13M1 / Mucin M1 Peptide Core Marker [clone 1-13M1] (V2733)

Catalog No.	Formulation	Size
V2733-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V2733-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V2733SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Citations (10)

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	1-13M1
Purity	Protein G affinity chromatography
UniProt	P98088
Localization	Cytoplasmic
Applications	ELISA (order BSA/sodium azide-free format)
Limitations	This MUC5AC Antibody 1-13M1 / Mucin M1 Peptide Core Marker is available for research use only.



Description

MUC5AC Antibody 1-13M1 / Mucin M1 Peptide Core Marker detects MUC5AC, a large secreted gel-forming mucin historically identified as gastric mucin M1. MUC5AC is produced by specialized mucus-secreting epithelial cells and is particularly abundant in gastric and respiratory mucosa. Extensive glycosylation contributes to the physical properties of the mature mucin and its ability to form hydrated mucus gels that protect and lubricate epithelial surfaces.

MUC5AC is prominently expressed by surface and foveolar epithelial cells of the stomach. Secreted MUC5AC contributes to the gastric mucus barrier that protects underlying epithelial cells from acid, digestive enzymes, microorganisms and mechanical injury. Its characteristic expression makes gastric mucin M1 relevant to studies of mucus-producing epithelial cells, gastric differentiation and mucosal barrier biology.

Changes in MUC5AC expression and glycosylation are investigated in gastrointestinal disease and cancer. MUC5AC is present in many primary ovarian mucinous tumors but is usually absent from colorectal adenocarcinoma, showing an expression pattern that differs from MUC2. Analysis of MUC5AC alongside other mucin and lineage markers can therefore contribute to research distinguishing primary mucinous ovarian tumors from colorectal tumors metastatic to the ovary. MUC5AC is also studied in intestinal metaplasia, pancreatic carcinoma and precancerous changes of pancreatic epithelium.

Outside the gastrointestinal tract, MUC5AC is produced by mucus-secreting cells of the respiratory epithelium. Expression can increase in response to inflammatory signals, allergens, infection and environmental irritants. Gastric and respiratory MUC5AC therefore share a broader biological role in mucus production, epithelial protection and mucosal defense.

Clone 1-13M1 is a mouse monoclonal antibody that recognizes an epitope within the peptide core of gastric mucin M1, now identified as MUC5AC. The recognized epitope is destroyed by beta-mercaptoethanol treatment but is resistant to periodate treatment. Clone 1-13M1 can be paired with clone 9-13M1 for measurement of MUC5AC protein by ELISA. The antibody was generated using an M1 mucin preparation obtained from ovarian mucinous cyst fluid. NSJ Bioreagents supplies antibodies for mucin, gastrointestinal and cancer research. A MUC5AC Antibody can be used to investigate gastric mucin biology, MUC5AC protein and mucin-associated tissue 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

Optimal dilution of the MUC5AC Antibody 1-13M1 / Mucin M1 Peptide Core Marker 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 MUC5AC Antibody 1-13M1.

Storage

Store the MUC5AC Antibody 1-13M1 at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).

Alternate Names

MUC5AC antibody, Mucin M1 Peptide Core Marker antibody, Mucin 5AC antibody, Gastric Mucin M1 antibody, Gastric Mucin antibody

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