abcam

ab218363

Alexa Fluor® 594 Anti-Mucin 5AC antibody [EPR16904]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 594
Excitation/Emission	Ex: 590nm, Em: 617nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR16904
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

ICC/IF

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Expected

Species	Human
Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information MUC5AC

Function	Gel-forming glycoprotein of gastric and respiratory tract epithelia that protects the mucosa from infection and chemical damage by binding to inhaled microorganisms and particles that are subsequently removed by the mucociliary system (PubMed:14535999, PubMed:14718370). Interacts with H.pylori in the gastric epithelium, Barrett's esophagus as well as in gastric metaplasia of the duodenum (GMD) (PubMed:14535999).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Mucin 5AC also known simply as MUC5AC is a high molecular weight glycoprotein with a mass in the megadaltons typically found in the human respiratory gastrointestinal and reproductive tracts. It is a major component of mucus which plays a critical role in protecting and lubricating the epithelial surfaces of these organs. MUC5AC is primarily expressed in the goblet cells of the respiratory epithelium and the stomach lining. Due to its significance researchers often use a MUC5AC ELISA or other detection methods such as tagging with Alexa Fluor 555 to measure its levels in various tissues.

Biological function summary	The functions of MUC5AC are central to the maintenance of the protective mucus barrier on epithelial surfaces preventing pathogen invasion and facilitating the clearance of inhaled particles. It is a part of the gel-forming mucin family and often forms complex structures by polymerizing with other mucins like MUC2 and MUC5B contributing to the viscoelastic properties of mucus. These interactions ensure the formation of a stable and robust mucosal barrier.
Pathways	The regulation of MUC5AC production involves several signaling pathways including the EGFR (epidermal growth factor receptor) pathway and the IL-13/STAT6 pathway. These pathways influence mucin production and secretion particularly in response to growth factors and inflammatory cytokines. Proteins such as 13M1 and 11M1 interact with MUC5AC within these pathways modulating its expression and function. This regulation is essential for normal mucus homeostasis and response to environmental challenges.
Associated diseases and disorders	MUC5AC has a strong association with respiratory conditions like asthma and chronic obstructive pulmonary disease (COPD). In these diseases the overproduction or altered composition of MUC5AC contributes to airway obstruction and reduced pulmonary function. MUC5AC levels can be indicative of disease severity and are often measured via tests like the 5AC blood test. In these contexts proteins such as 5AC protein and 45M1 are often studied for their roles in facilitating disease progression and as potential therapeutic targets to modulate mucin levels in affected individuals.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

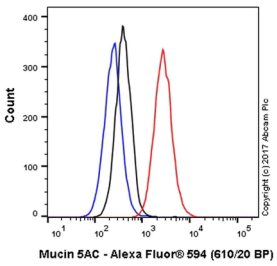
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

1 product image



Flow Cytometry - Alexa Fluor® 594 Anti-Mucin 5AC antibody [EPR16904] (ab218363)

Mucin 5AC Flow Cytometry staining using rabbit Anti-Mucin 5AC antibody

Overlay histogram showing HeLa cells stained with ab218363 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Triton X-100 for 15 min. The cells were then incubated in 1x PBS / 10% normal goat serum to block non-specific protein-protein interactions followed by the antibody (ab218363, 1/50 dilution) for 30 min at 22°C.
Isotype control antibody (black line) was Rabbit IgG (monoclonal) Alexa Fluor® 594 (ab208568) used at the same concentration and conditions as the primary antibody. Unlabelled sample (blue line) was also used as a control.

Acquisition of >5,000 events were collected using a 50 mW Yellow/Green laser (561nm) and 610/20 Bandpass filter.

This antibody gave a positive signal in HeLa cells fixed with 4% formaldehyde (10 min)/permeabilized with 0.1% PBS-Triton X-100 for 15 min used under the same conditions.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.