abcam

Product datasheet

Anti-Mucin 5AC antibody [45M1] - BSA and Azide free ab212636

Recombinant

4 Abreviews 8 References 8 Images

Overview

Product name	Anti-Mucin 5AC antibody [45M1] - BSA and Azide free
Description	Mouse monoclonal [45M1] to Mucin 5AC - BSA and Azide free
Host species	Mouse
Tested applications	**Suitable for:** ICC/IF, IHC-Fr, mIHC, IHC-P
Species reactivity	**Reacts with:** Mouse, Rat, Human
Immunogen	Full length protein corresponding to Human Mucin 5AC. (M1 mucin preparation from the fluid of an ovarian mucinous cyst belonging to an O Le(a-b) patient).
Epitope	Located in the C-terminal cysteine rich part of the peptide core of MUC5AC.
Positive control	IHC-P: Human, mouse, and rat stomach tissues; IHC-Fr: Mouse and rat stomach tissues; ICC/IF: A549 cells. mIHC: Human stomach tissue.
General notes	This product has switched from a hybridoma to recombinant production method on 8th March 2021. 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 production For more information **see here**.

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C. Do Not Freeze.
Storage buffer	pH: 7.2 Constituent: 100% PBS
Carrier free	Yes
Purity	Protein A purified
Clonality	Monoclonal

Clone number	45M1
Isotype	IgG1
Light chain type	kappa

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab212636 in the following tested applications.

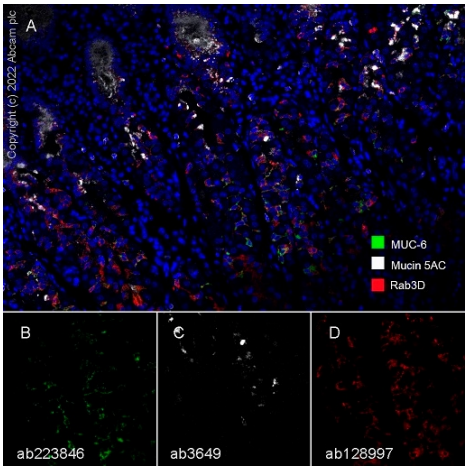
The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
ICC/IF	★★★★★ (1)	Use at an assay dependent concentration.
IHC-Fr		Use at an assay dependent concentration.
mIHC		Use at an assay dependent concentration.
IHC-P	★★★★★ (2)	Use at an assay dependent concentration. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.

Target

Function	Gel-forming glycoprotein of gastric and respiratoy tract epithelia that protects the mucosa from infection and chemical damage by binding to inhaled microrganisms and particles that are subsequently removed by the mucocilary system.
Tissue specificity	Highly expressed in surface mucosal cells of respiratory tract and stomach epithelia. Overexpressed in a number of carcinomas. Also expressed in Barrett's esophagus epithelium and in the proximal duodenum.
Sequence similarities	Contains 1 CTCK (C-terminal cystine knot-like) domain. Contains 3 TIL (trypsin inhibitory-like) domains. Contains 4 VWFC domains. Contains 4 VWFD domains.
Domain	The cysteine residues in the Cys-rich subdomain repeats are not involved in disulfide bonding.
Post-translational modifications	C-, O- and N-glycosylated. O-glycosylated on the Thr-/Ser-rich tandem repeats. C-mannosylation in the Cys-rich subdomains may be required for proper folding of these regions and for export from the endoplasmic reticulum during biosynthesis. Proteolytic cleavage in the C-terminal is initiated early in the secretory pathway and does not involve a serine protease. The extent of cleavage is increased in the acidic parts of the secretory pathway. Cleavage generates a reactive group which could link the protein to a primary amide.
Cellular localization	Secreted.

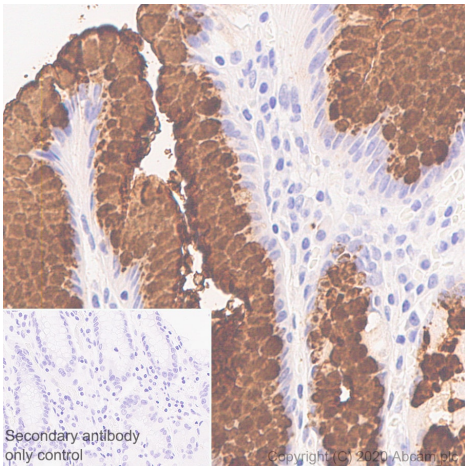
Images



Multiplex immunohistochemistry - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

Fluorescence multiplex immunohistochemical analysis of the human stomach (Formalin/PFA-fixed paraffin-embedded sections). Panel A: merged staining of anti-Mucin 5AC (**ab3649**, gray; Opal™690), anti-MUC-6 (**ab223846**, green; Opal™520) and anti-Rab3D (**ab128997**, red; Opal™570) on human stomach. Panel B: anti-MUC-6 stained on mucous neck cells. Panel C: anti-Mucin 5AC stained on surface mucous cells. Panel D: anti-Rab3D stained on Chief cells. Opal Polymer HRP Ms + Rb was used as a secondary antibody. The immunostaining was performed on a Leica Biosystems BOND® RX instrument with an Opal™ 4-color kit. The section was incubated in three rounds of staining: in the order of **ab3649** (1/5000 dilution), **ab223846** (1/1000 dilution), and **ab128997** (1/10000 dilution) for 30 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) was used for 20 mins. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Leica SP8 confocal microscope.

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

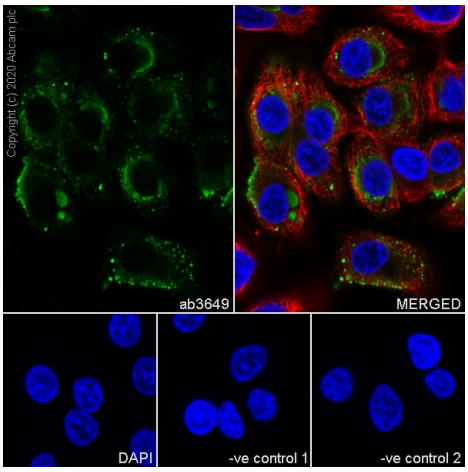


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human stomach tissue labeling Mucin 5AC with **ab3649** at 1/5000 dilution. Heat mediated antigen retrieval was performed using Citrate buffer pH 6 (epitope retrieval solution 1) for 20 minutes. The section was incubated with **ab3649** for 30 mins at room temperature. Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**) was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument



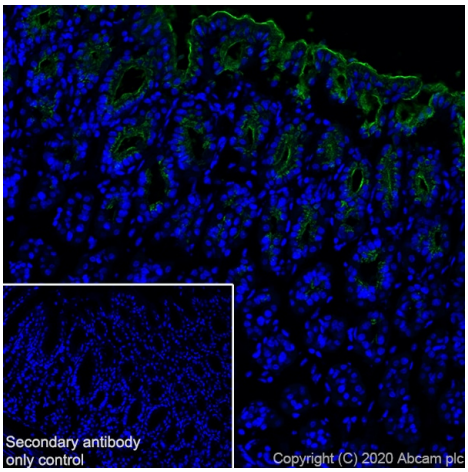
Immunocytochemistry/ Immunofluorescence - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunocytochemistry analysis of A549 (human lung carcinoma cell line) cells labeling Mucin 5AC with **ab3649** at 1/100 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100. Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (**ab150113**) at 1/1000 was used as the secondary antibody (green). Cells were counterstained with Anti-beta Tubulin rabbit monoclonal antibody (**ab179513**) at 1/200 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 594) (**ab150080**) at 1/1000 dilution (red). Nuclear DNA was labelled with DAPI (blue).

Negative control 1: **ab3649** (Mouse monoclonal antibody to Mucin 5AC at 1/100 dilution) and **ab150080** (anti-Rabbit secondary Alexa Fluor® 594 at 1/1000 dilution)

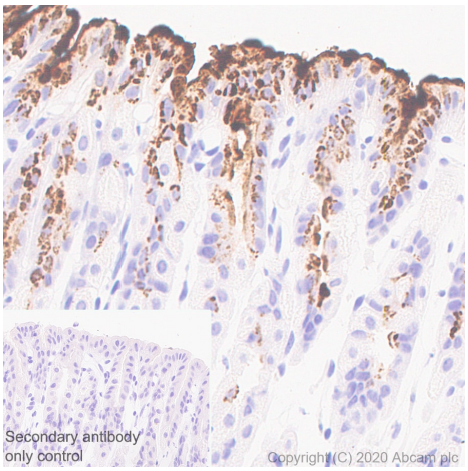
Negative control 2: **ab179513** (Rabbit monoclonal antibody to beta Tubulin at 1/200 dilution) and **ab150113** (anti-Mouse secondary Alexa Fluor® 488 at 1/1000 dilution)



Immunohistochemistry (Frozen sections) - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Frozen sections) analysis of mouse stomach tissue labeling Mucin 5AC with **ab3649** at 1/100 dilution. Tissue was fixed with 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Heat mediated antigen retrieval was performed using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (**ab150113**) was used as the secondary antibody at 1/1000 dilution (green). Nuclei counterstained with DAPI (blue).

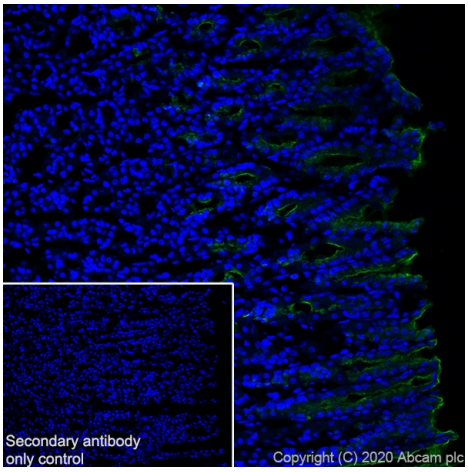


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse stomach tissue labeling Mucin 5AC with **ab3649** at 1/5000 dilution. Heat mediated antigen retrieval was performed using Citrate buffer pH 6 (epitope retrieval solution 1) for 20 minutes. The section was incubated with **ab3649** for 30 mins at room temperature. Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**) was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

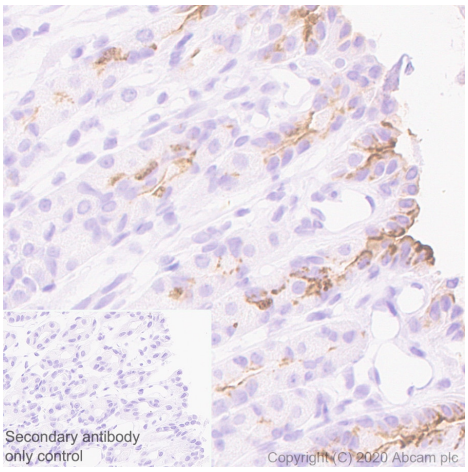
The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Immunohistochemistry (Frozen sections) - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Frozen sections) analysis of rat stomach tissue labeling Mucin 5AC with **ab3649** at 1/100 dilution. Tissue was fixed with 4% paraformaldehyde and permeabilized with 0.2% Triton X-100. Heat mediated antigen retrieval was performed using sodium citrate buffer (10mM citrate pH 6.0 + 0.05% Tween-20). Goat Anti-Mouse IgG H&L (Alexa Fluor® 488) (**ab150113**) was used as the secondary antibody at 1/1000 dilution (green). Nuclei counterstained with DAPI (blue).

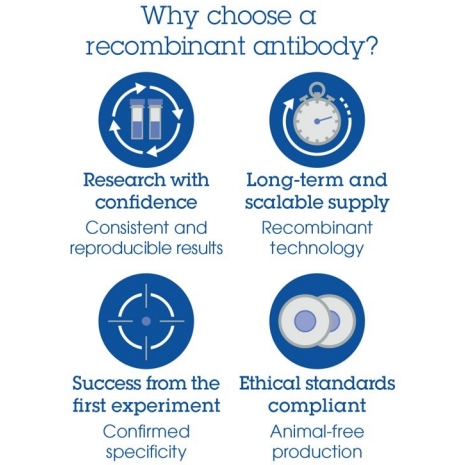


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

This data was developed using **ab3649**, the same antibody clone in a different buffer formulation.

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat stomach tissue labeling Mucin 5AC with **ab3649** at 1/5000 dilution. Heat mediated antigen retrieval was performed using Citrate buffer pH 6 (epitope retrieval solution 1) for 20 minutes. The section was incubated with **ab3649** for 30 mins at room temperature. Goat Anti-Mouse IgG H&L (HRP polymer) (**ab214879**) was used as the secondary antibody. Negative control using PBS instead of primary antibody. Counterstained with hematoxylin.

The immunostaining was performed on a Leica Biosystems BOND® RX instrument



Anti-Mucin 5AC antibody [45M1] - BSA and Azide free (ab212636)

Our Abpromise to you: Quality guaranteed and expert technical support

- Replacement or refund for products not performing as stated on the datasheet
- Valid for 12 months from date of delivery
- Response to your inquiry within 24 hours

- We provide support in Chinese, English, French, German, Japanese and Spanish
- Extensive multi-media technical resources to help you
- We investigate all quality concerns to ensure our products perform to the highest standards

If the product does not perform as described on this datasheet, we will offer a refund or replacement. For full details of the Abpromise, please visit **https://www.abcam.com/abpromise** or contact our technical team.

Terms and conditions

- Guarantee only valid for products bought direct from Abcam or one of our authorized distributors