abcam

ab60720

Anti-MUC4 antibody [5B12]

Key facts

Isotype	IgG2a
Host species	Mouse
Storage buffer	pH: 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human MUC4 aa 50-200. The exact immunogen used to generate this antibody is proprietary information. Database link Q99102
Clone number	5B12
Purity	Tissue culture supernatant

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	ab170191 - Mouse monoclonal IgG2a, is suitable for use as an isotype control with this antibody.

WB

Tested

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information MUC4

Function

Membrane-bound mucin, a family of highly glycosylated proteins that constitute the major component of the mucus, the slimy and viscous secretion covering epithelial surfaces (PubMed:10880978). These glycoproteins play important roles in the protection of the epithelium and are implicated in epithelial renewal and differentiation (PubMed:10880978). Regulates cellular behavior through both anti-adhesive effects on cell-cell and cell-extracellular matrix interactions and its ability to act as an intramembrane ligand for ERBB2. Plays an important role in proliferation and differentiation of epithelial cells by inducing specific phosphorylation of ERBB2. In polarized epithelial cells, segregates ERBB2 and other ERBB receptors and prevents ERBB2 from acting as a coreceptor. The interaction with ERBB2 leads to enhanced expression of CDKN1B. The formation of a MUC4-ERBB2-ERBB3-NRG1 complex leads to down-regulation of CDKN1B, resulting in repression of apoptosis and stimulation of proliferation. Its ability to promote tumor growth may be mainly due to repression of apoptosis as opposed to proliferation.

Storage

Shipped at conditions	Blue Ice
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

Notes

This product was changed from ascites to tissue culture supernatant on 12 Feb 2019. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team.

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

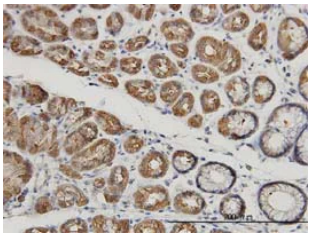
We do not recommend this combination. It is not covered by our product promise.

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.

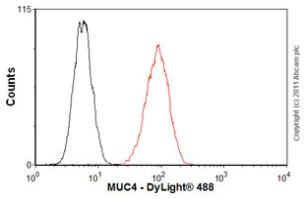
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-MUC4 antibody [5B12] (ab60720)

MUC4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using mouse Anti-MUC4 antibody

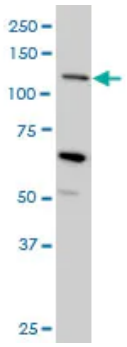
MUC4 antibody (ab60720) used in immunohistochemistry at 3ug/mL on formalin fixed and paraffin embedded human stomach.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-MUC4 antibody [5B12] (ab60720)

MUC4 Flow Cytometry staining using mouse Anti-MUC4 antibody

Overlay histogram showing A549 cells stained with ab60720 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab60720, 0.5µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG2a [ICIGG2A] (ab91361, 1µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in A549 cells fixed with 4% paraformaldehyde/permeabilized in 0.1% PBS-Tween used under the same conditions.
This image was generated using the ascites version of the product.



Western blot - Anti-MUC4 antibody [5B12] (ab60720)

This image was generated using the ascites version of the product.
All lanes:
Western blot - Anti-MUC4 antibody [5B12] (ab60720) at 1 µg/mL

All lanes:
HeLa cell lysate at 25 µg

Predicted band size: 232 kDa

Observed band size: 120 kDa, 52 kDa, 65 kDa

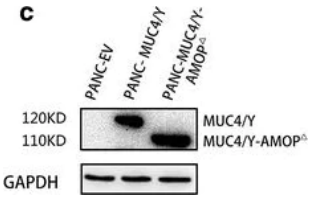


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Western blot - Anti-MUC4 antibody [5B12] (ab60720)

MUC4 Western blot staining using mouse Anti-MUC4 antibody

MUC4 western blot using anti-MUC4 antibody [5B12] ab60720. Publication image and figure legend from Tang, J., Zhu, Y., et al., 2016, J Exp Clin Cancer Res, PubMed 27287498.

ab60720 was used in this publication in western blot. This may not be the same as the application(s) guaranteed by Abcam. For a full list of applications guaranteed by Abcam for ab60720 please see the product overview.

MUC4/Y and MUC4/Y-AMOP domain-deletion constructs and their stable expression in PANC-1 cells. a The structure diagram of the MUC4, MUC4/Y and MUC4/Y-AMOP⊠. Different domains present in MUC4 protein are the central large tandem repeat domain, NIDO, AMOP, vWD, and 3 carboxyl-terminal located EGF domains. b MUC4/Y expression was analysed by real-time PCR in different PANC-1 derived sub-lines. GAPDH was used as an internal control. c Western blot was conducted to analyse the protein level of MUC4/Y in different groups. GAPDH was probed as an internal control. d Cell confocal immunofluorescence assay showed that the MUC4/Y and the truncated protein (MUC4/Y-AMOPΔ) could anchor on the cytomembrane and cytoplasm.**p < 0.01

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