abcam

ab256588

# Anti-MUC1 antibody [EP1024Y] - BSA and Azide free

Recombinant | RabMAb

## Key facts

| | |
|---|---|
| **Isotype** | IgG |
| **Host species** | Rabbit |
| **Storage buffer** | pH: 7.2 - 7.4 Constituents: PBS |
| **Form** | Liquid |
| **Clonality** | Monoclonal |
| **Immunogen** | The exact immunogen used to generate this antibody is proprietary information. |
| **Carrier free** | Yes |
| **Clone number** | EP1024Y |
| **Purification technique** | Affinity purification Protein A |
| **Concentration** | 0.997 mg/mL The concentration of this product may be batch-dependent<br>Batch concentration finder → |

## Reactivity data

### IP

#### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Flow Cyt

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody. |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## WB

### Expected

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | MUC1 isoform 7. |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## ICC/IF

### Tested

| | |
|---|---|
| **Species** | Human |
| **Dilution info** | - |
| **Notes** | - |

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## IHC-Fr

### Expected

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

### Predicted

| | |
|---|---|
| **Species** | Mouse, Rat |
| **Dilution info** | - |
| **Notes** | - |

## Target data

See full target information MUC1

**Function** The alpha subunit has cell adhesive properties. Can act both as an adhesion and an anti-adhesion protein. May provide a protective layer on epithelial cells against bacterial and enzyme attack. The beta subunit contains a C-terminal domain which is involved in cell signaling, through phosphorylations and protein-protein interactions. Modulates signaling in ERK, SRC and NF-kappa-B pathways. In activated T-cells, influences directly or indirectly the Ras/MAPK pathway. Promotes tumor progression. Regulates TP53-mediated transcription and determines cell fate in the genotoxic stress response. Binds, together with KLF4, the PE21 promoter element of TP53 and represses TP53 activity.

## Storage

| | |
|---|---|
| **Shipped at conditions** | Blue Ice |
| **Appropriate short-term storage conditions** | +4°C |
| **Appropriate long-term storage conditions** | +4°C |
| **Storage information** | Do Not Freeze |

## Notes

ab256588 is the carrier-free version of ab45167.

**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.

**Conjugation ready**
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

**Compatibility**
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

## 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.

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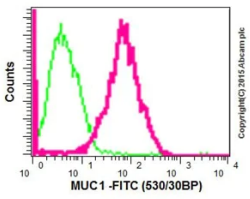
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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## 7 product images

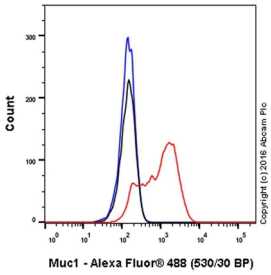



### Flow Cytometry - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Flow Cytometry staining using rabbit Anti-MUC1 antibody

Flow cytometry analysis of T47D (human mammary gland ductal carcinoma) cells labelling MUC1 with unpurified ab45167 (pink) at a dilution of 1/150. Cells were fixed with 2% paraformaldehyde. A FITC-conjugated goat anti-rabbit IgG was used as the secondary antibody. Rabbit monoclonal IgG (ab172730) was used as the isotype control (green).
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).

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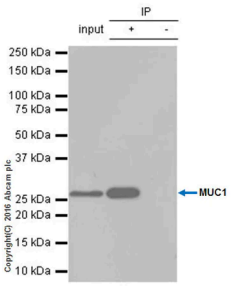



### Flow Cytometry - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Flow Cytometry staining using rabbit Anti-MUC1 antibody

Flow Cytometry analysis of A549 (human lung carcinoma cell line) cells labeling MUC1 with purified ab45167 at 1/20 dilution (10 ug/ml). Cells were fixed with 4% paraformaldehyde. A goat anti-rabbit IgG (Alexa Fluor® 488) was used as the secondary antibody at 1/2000 dilution. Black - Isotype control, Rabbit monoclonal IgG. Blue - unlabeled control, cells without incubation with primary antibody and secondary antibody.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).

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## Immunoprecipitation - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

ab45167 (purified) at 1/20 dilution (2ug) immunoprecipitating MUC1 in Human fetal lung lysate.
**Lane 1 (input):** Human fetal lung lysate 10ug

**Lane 2 (+):** ab45167 + Human fetal lung lysate 10ug

**Lane 3 (-):** Rabbit monoclonal IgG (ab172730) instead of ab45167 in Human fetal lung lysate

For western blotting, ab131366 VeriBlot for IP (HRP) was used for detection at 1/1000 dilution.

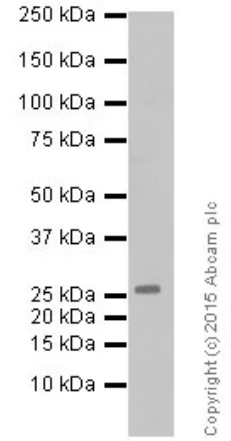
Blocking buffer and concentration: 5% NFDM/TBST.Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).

All lanes:
Immunoprecipitation - Anti-MUC1 antibody [EP1024Y] (ab45167)

Predicted band size: 122 kDa

Observed band size: 27 kDa




## Western blot - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Western blot staining of T47D cell lysate using rabbit Anti-MUC1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).
Blocking and diluting buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-MUC1 antibody [EP1024Y] (ab45167) at 1/2000 dilution

All lanes:
T47D cell lysate at 10 µg

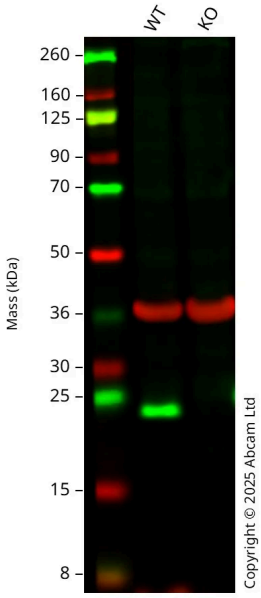
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/1000 dilution

Predicted band size: 122 kDa

Observed band size: 27 kDa

Exposure time: 3min




## Western blot - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Western blot staining using rabbit Anti-MUC1 antibody

**Lanes 1- 2:** Merged signal (red and green). Green - ab45167 observed at 24 kDa. Red - Anti-GAPDH antibody [6C5] - Loading Control (ab8245) observed at 37 kDa.

ab45167 was shown to react with MUC1 in Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) cells in western blot. Loss of signal was observed when knockout cell line ab255412 (knockout cell lysate ab263764) was used. Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) and MUC1 knockout HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysates were subjected to SDS-PAGE. Membrane was blocked for 1 hour at room temperature in 0.1% TBST with 3% non-fat dried milk. ab45167 and Anti-GAPDH antibody [6C5] - Loading Control (ab8245) overnight at 4°C at a 1 in 1000 dilution and a 1 in 20000 dilution respectively. Blots were developed with Goat anti-Rabbit IgG H&L (IRDye®800CW) preadsorbed (ab216773) and Goat anti-Mouse IgG H&L (IRDye®680RD) preadsorbed (ab216776) secondary antibodies at 1 in 20000 dilution for 1 hour at room temperature before imaging.

All lanes:
Western blot - Anti-MUC1 antibody [EP1024Y] (ab45167) at 1/1000 dilution

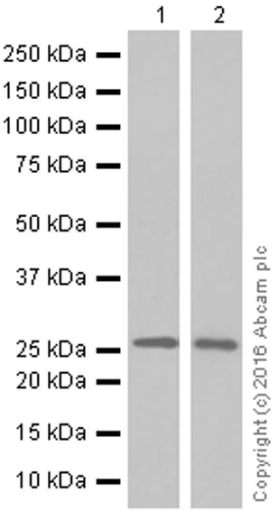
Lane 1:
Wild-type HeLa (Human epithelial cell line from cervix adenocarcinoma) cell lysate at 20 µg

Lane 2:
Western blot - Human MUC1 knockout HeLa cell lysate (ab263764) at 20 µg

Performed under reducing conditions.

Predicted band size: 122 kDa

Observed band size: 24 kDa




## Western blot - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Western blot staining using rabbit Anti-MUC1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).
Blocking and diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Western blot - Anti-MUC1 antibody [EP1024Y] (ab45167) at 1/1000 dilution

Lane 1:
Human colon cancer lysate at 20 µg

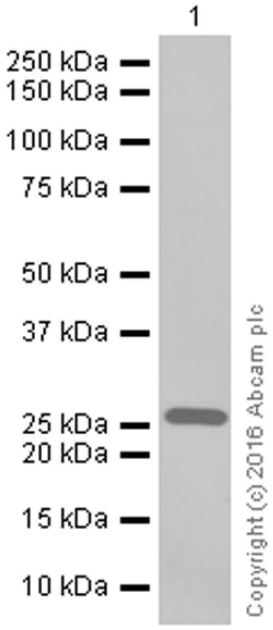
Lane 2:
Rat liver lysate at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 122 kDa

Observed band size: 27 kDa




# Western blot - Anti-MUC1 antibody [EP1024Y] - BSA and Azide free (ab256588)

MUC1 Western blot staining of Mouse liver lysate using rabbit Anti-MUC1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab45167).
Blocking and diluting buffer and concentration: 5% NFDM /TBST.

All lanes:
Western blot - Anti-MUC1 antibody [EP1024Y] (ab45167) at 1/5000 dilution

All lanes:
Mouse liver lysate at 20 µg

Secondary

All lanes:
Anti-Rabbit IgG (HRP), specific to the non-reduced form of IgG at 1/2000 dilution

Predicted band size: 122 kDa

Observed band size: 27 kDa

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