

Anti-MUC4 Antibody Picoband®

Catalog Number: A01652-2

About MUC4

Mucin 4, also known as MUC4, is a mucin protein that in humans is encoded by the MUC4 gene. Like other mucins, Mucin 4 is a high-molecular weight glycoprotein. It is mapped to 3q29. In normal functioning, Mucin 4 is known to play anti-adhesive roles in the body, such as in lubricating the reproductive lining. It is found in the respiratory tract, particularly in the trachea and lung and the digestive tract, in the esophagus and colon, as well as in the visual and auditory systems. Mucin 4 serves to protect and lubricate the epithelium, which facilitates transport and traps foreign particles. It is found to be overexpressed during the luteal phase of menstruation. Mucin 4 may also have a role in fetal morphogenic development.

Overview

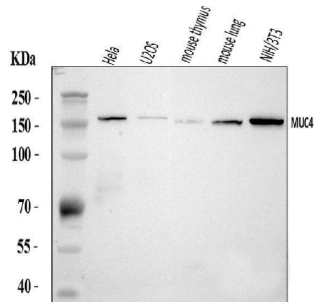
Product Name	Anti-MUC4 Antibody Picoband®
Reactive Species	Human, Mouse
Description	Boster Bio Anti-MUC4 Antibody Picoband® catalog # A01652-2. Tested in ELISA, Flow Cytometry, IF, WB applications. This antibody reacts with Human, Mouse. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	ELISA, Flow Cytometry, IF, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.
Host	Rabbit
Uniprot ID	Q99102

Technical Details

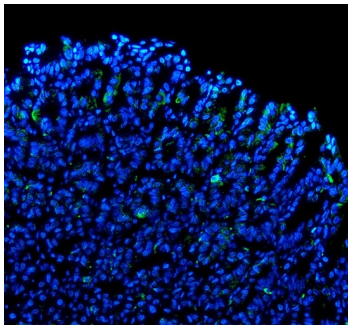
Immunogen	E.coli-derived human MUC4 recombinant protein (Position: Q1250-D1444).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.

Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse Flow Cytometry (Fixed), 1-3 ug/1x10 ⁶ cells, Human ELISA, 0.1-0.5 ug/ml, -

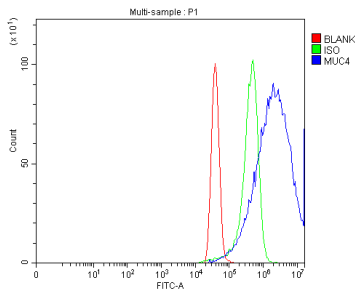
Anti-MUC4 Antibody Picoband® (A01652-2) Images



Western blot analysis of MUC4 using anti-MUC4 antibody (A01652-2). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human Hela whole cell lysates, Lane 2: human U20S whole cell lysates, Lane 3: mouse thymus tissue lysates, Lane 4: mouse lung tissue lysates, Lane 5: mouse NIH/3T3 whole cell lysates. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-MUC4 antigen affinity purified polyclonal antibody (Catalog # A01652-2) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for MUC4 at approximately 170 kDa. The expected band size for MUC4 is at 232 kDa.



IF analysis of MUC4 using anti-MUC4 antibody (A01652-2). MUC4 was detected in a paraffin-embedded section of mouse stomach tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 10 ug/mL rabbit anti-MUC4 Antibody (A01652-2) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of MCF-7 cells using anti-MUC4 antibody (A01652-2). Overlay histogram showing MCF-7 cells stained with A01652-2 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-MUC4 Antibody (A01652-2, 1 ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10⁶) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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Anti-MUC4 Antibody

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