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antibody and ELISA experts

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Anti-EpCAM Antibody Picoband™

Catalog Number: PB10059

About EPCAM

Epithelial cell adhesion molecule (EpCAM) is a transmembrane glycoprotein mediating Ca2+-independent homotypic cell–cell adhesion in epithelia. This gene encodes a carcinoma-associated antigen and is a member of a family that includes at least two type I membrane proteins. This antigen is expressed on most normal epithelial cells and gastrointestinal carcinomas and functions as a homotypic calcium-independent cell adhesion molecule. The antigen is being used as a target for immunotherapy treatment of human carcinomas. Mutations in this gene result in congenital tufting enteropathy.

Overview

Product Name	Anti-EpCAM Antibody Picoband™
Reactive Species	Human
Description	Boster Bio Anti-EpCAM Antibody Picoband™ catalog # PB10059. Tested in ELISA, Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human.
Application	ELISA, Flow Cytometry, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Storage Instructions	Store 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 freeze-thaw cycles.
Host	Rabbit
Uniprot ID	P16422

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human EPCAM, different from the related mouse sequence by fifteen amino acids, and from the related rat sequence by sixteen amino acids.
Predicted Reactive Species	Bovine, Canine, Chicken, Hamster, Horse, Monkey, Rabbit, Zebrafish
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P), IHC(F) and ICC.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, By Heat Immunofluorescence, 2.5ug/ml Flow Cytometry, 1-3ug/1x10^6cells ELISA , 0.1-0.5ug/ml

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Anti-EpCAM Antibody Picoband™ (PB10059) Images

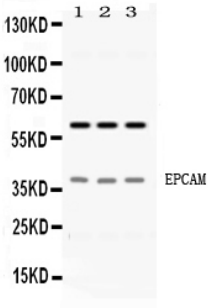

Figure 1. Western blot analysis of EPCAM using anti-EPCAM antibody (PB10059).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: HELA whole cell lysates,
Lane 2: A549 whole cell lysates,
Lane 3: PANC-1 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-EPCAM antigen affinity purified polyclonal antibody (Catalog # PB10059) 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 EPCAM at approximately 40 kDa. The expected band size for EPCAM is at 40 kDa.

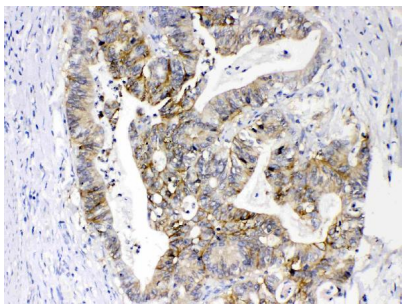

Figure 2. IHC analysis of EPCAM using anti-EPCAM antibody (PB10059).
EPCAM was detected in a paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-EPCAM Antibody (PB10059) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

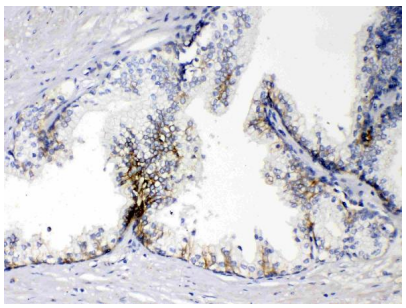

Figure 3. IHC analysis of EPCAM using anti-EPCAM antibody (PB10059).
EPCAM was detected in a paraffin-embedded section of human prostatic cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-EPCAM Antibody (PB10059) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.

Figure 4. IF analysis of EPCAM using anti-EPCAM antibody (PB10059).
EPCAM was detected in paraffin-embedded section of

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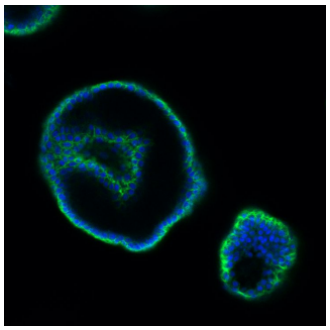

human colon organoid tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2.5ug/mL rabbit anti-EPCAM Antibody (PB10059) overnight at 4°C. DyLight®488 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.

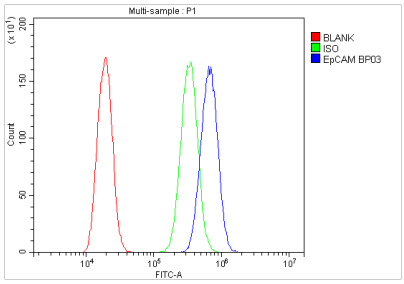

Figure 5. Flow Cytometry analysis of A431 cells using anti-EPCAM antibody (PB10059).
Overlay histogram showing A431 cells stained with PB10059 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-EPCAM Antibody (PB10059, 1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

5 Publications Citing This Product

1. PubMed ID: 10.1039/C5AN00799B, Deformability and size-based cancer cell separation using an integrated microfluidic device

2. PubMed ID: 10.1002/cbin.11598, Epithelial cell adhesion molecule promotes breast cancer resistance protein‐mediated multidrug resistance in breast cancer by inducing partial epithelial–mesenchymal transition

3. PubMed ID: 33069797, Shi R,Liu L,Wang F,He Y,Niu Y,Wang C,Zhang X,Zhang X,Zhang H,Chen M,Wang Y.Downregulation of cytokeratin 18 induces cellular partial EMT and stemness through increasing EpCAM expression in breast cancer.Cell Signal.2020 Dec;76:109810.doi:10.1016/j.cellsig

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