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Anti-Cytokeratin 18/KRT18 Antibody Picoband®

Catalog Number: A01357-1

About KRT18

Keratin 18, mapped to 12q13.13, is a type I cytokeratin. It is, together with its filament partner keratin 8, perhaps the most commonly found products of the intermediate filament gene family. They are expressed in single layer epithelial tissues of the body. Mutations in this gene have been linked to cryptogenic cirrhosis. Two transcript variants encoding the same protein have been found for this gene.

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Overview

Product Name	Anti-Cytokeratin 18/KRT18 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Cytokeratin 18/KRT18 Antibody Picoband® catalog # A01357-1. Tested in Flow Cytometry, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat. 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	Flow Cytometry, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	P05783

Technical Details

Immunogen	E.coli-derived human Cytokeratin 18 recombinant protein (Position: E204-H430). Human Cytokeratin 18 shares 87.7% and 85.9% amino acid (aa) sequence identity with mouse and rat Cytokeratin 18, respectively.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	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
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Immunofluorescence, 5 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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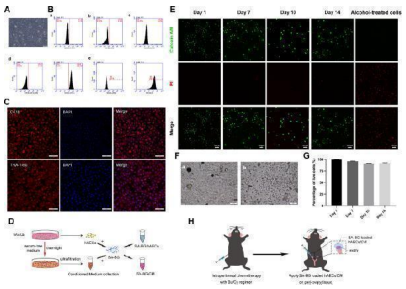
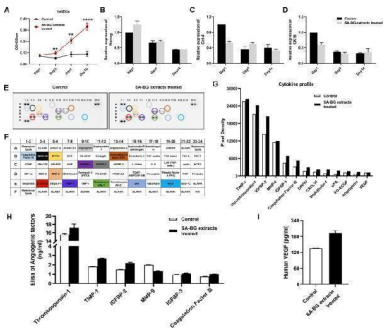
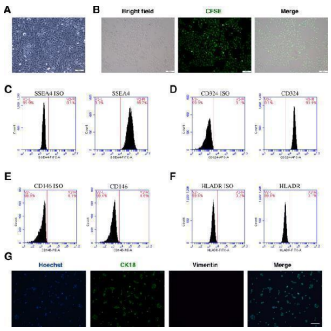
Anti-Cytokeratin 18/KRT18 Antibody Picoband® (A01357-1) Images



Characterization of hAECs, detection of the survival hAECs encapsulated in SA-BG, and schematic illustration of the surgical procedure. a The morphology of cultured hAECs was observed under a microscope. Scale bar 100 um. b Flow cytometry analysis of cell surface markers on hAECs. The isotypes (ISO) of SSEA4 and CD324 were used as negative controls. c Immunostaining images showed the high expression of epithelial marker (CK18) and stem cell marker (TRA-1-60). Scale bar 100 um. d The fabrication method of SA-BG-loaded hAECs and CM. e Representative live/dead images of hAECs encapsulated in SA-BG at days 1, 7, 10, and 14, respectively. hAECs encapsulated in SA-BG treated with 70% alcohol were positive for PI. Live cells were shown green color and dead cells were red color. Scale bar 100 um. f Bright field image of hAECs capsulated in SA-BG at day 1 (a) and 14 (b). Scale bar 100 um. g The percentage of live cells to total cells. h Schematic of the experimental procedure for the transplantation of SA-BG-loaded hAECs/CM into mice with chemotherapy-induced POF Index in PubMed under a CC BY license. PMID: 33794993



The effect of SA-BG extracts on the biological characterization and paracrine capacity of hAECs. a The viability of hAECs cultured with SA-BG extracts was detected by CCK-8 assay. b – d Expression of stemness (Oct-4 and Nanog) and epithelial (CK18) genes of hAECs cultured with SA-BG extracts at different time points. e , f The results of cytokine array of CM from hAECs and SA-BG extract-treated hAECs, respectively. g Column displayed the higher expression of cytokines in the SA-BG extract-treated hAECs than in the control hAECs. h , i The results of quantification of angiogenic factors released from SA-BG extract-treated hAECs and control hAECs by ELISA Index in PubMed under a CC BY license. PMID: 33794993



hAECs express specific surface markers and have stem cell characteristics with low immunogenicity. a hAECs presented an epithelial morphology under bright-field microscopy. Scale bar = 100 um. b hAECs were labeled with CFSE to track implanted cells. The expression rate of green fluorescence staining was nearly 100%. Scale bar = 100 um. c-f By flow cytometry, hAECs were positive for stem cell marker SSEA-4 (c) and epithelial marker CD324 (d) and were negative for mesenchymal markers CD146 (e) and HLA-DR (f). g Immunofluorescence staining for CK18 (an epithelial marker) expression and vimentin (a mesenchymal marker) in hAECs. Scale bar = 200 um Index in PubMed under a CC BY license. PMID: 33762002

Western blot analysis of KRT18 using anti-KRT18 antibody (A01357-1). Electrophoresis was performed on a 10% SDS-

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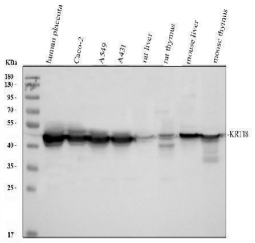
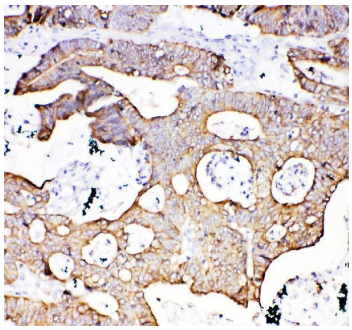
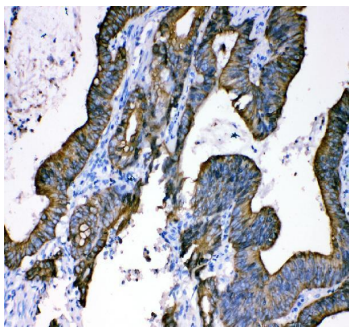


PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human placenta tissue lysates, Lane 2: human CACO2 whole cell lysates, Lane 3: human A549 whole cell lysates, Lane 4: human A431 whole cell lysates, Lane 5: rat liver tissue lysates, Lane 6: rat thymus tissue lysates, Lane 7: mouse liver tissue lysates, Lane 8: mouse thymus tissue 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-KRT18 antigen affinity purified polyclonal antibody (A01357-1) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for KRT18 at approximately 48 kDa. The expected band size for KRT18 is at 48 kDa.



IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 was detected in a paraffin-embedded section of human breast 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30

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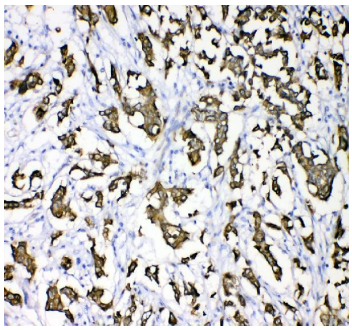
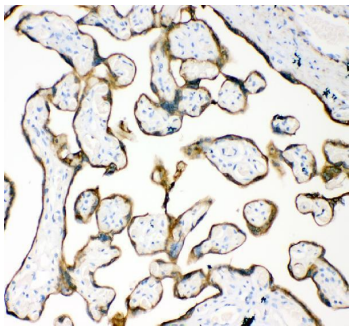
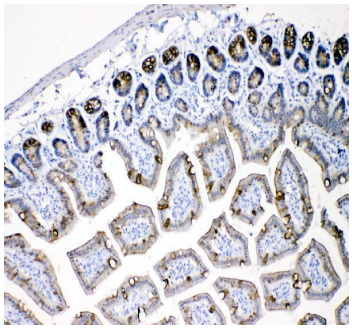


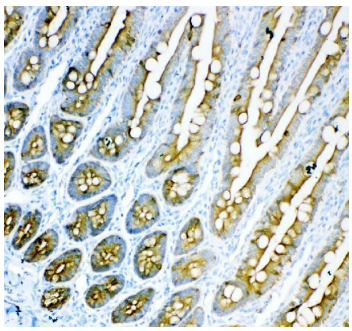
minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 was detected in a paraffin-embedded section of human placenta 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 was detected in a paraffin-embedded section of mouse intestine 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.



IHC analysis of KRT18 using anti-KRT18 antibody (A01357-1). KRT18 was detected in a paraffin-embedded section of rat colon 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 2 ug/ml rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

IF analysis of KRT18 using anti-KRT18 antibody (A01357-1) KRT18 was detected in paraffin-embedded section of human intestinal cancer tissues. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat

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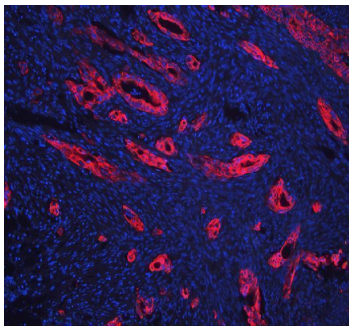
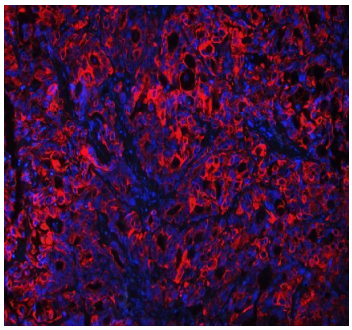
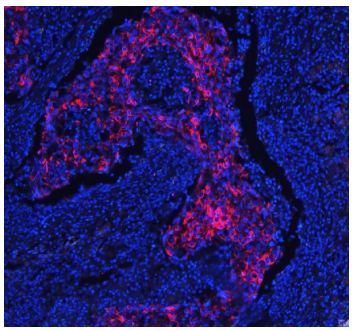


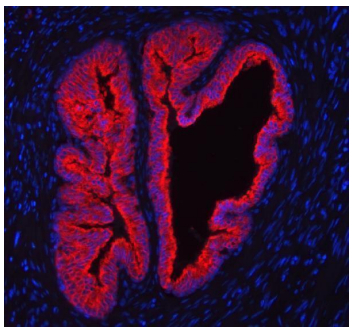
serum. The tissue section was then incubated with 5ug/mL rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of KRT18 using anti-KRT18 antibody (A01357-1) KRT18 was detected in paraffin-embedded section of human gastric cancer tissues. 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 5ug/mL rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of KRT18 using anti-KRT18 antibody (A01357-1) KRT18 was detected in paraffin-embedded section of human lung cancer tissues. 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 5ug/mL rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IF analysis of KRT18 using anti-KRT18 antibody (A01357-1) KRT18 was detected in paraffin-embedded section of human prostatic cancer tissues. 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 5ug/mL rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

IF analysis of KRT18 using anti-KRT18 antibody (A01357-1) KRT18 was detected in paraffin-embedded section of human

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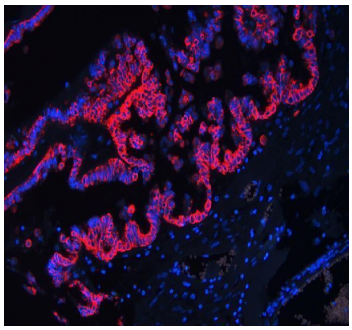
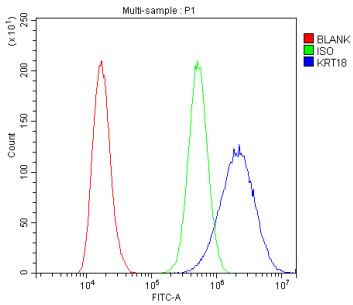


ovarian cancer tissues. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 5ug/mL rabbit anti-KRT18 Antibody (A01357-1) overnight at 4°C. Biotin conjugated goat anti-rabbit IgG (BA1003) was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Cy3 Conjugated Avidin (BA1037). The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



Flow Cytometry analysis of A431 cells using anti-KRT18 antibody (A01357-1). Overlay histogram showing A431 cells stained with A01357-1 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-KRT18 Antibody (A01357-1, 1 ug/1x106 cells) for 30 min at 20°C. Fluoro488 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.

15 Publications Citing This Product

1. PubMed ID: 10.1186/s13287-021-02260-6, Transplantation of human amniotic epithelial cells promotes morphological and functional regeneration in a rat uterine scar model

2. PubMed ID: 10.1186/s13287-021-02280-2, Sodium alginate-bioglass-encapsulated hAECs restore ovarian function in premature ovarian failure by stimulating angiogenic factor secretion

3. PubMed ID: 10.3748/wjg.v19.i44.8020, Expression of hepatitis B virus 1.3-fold genome plasmid in an SV40 T-antigen-immortalized mouse hepatic cell line

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