

## Anti-Integrin alpha 5/ITGA5 Antibody Picoband™

Catalog Number: A01911

### About ITGA5

Integrin alpha-5, also known as FNRA or VLA5A, is a protein that in humans is encoded by the ITGA5 gene. The product of this gene belongs to the integrin alpha chain family. Integrins are integral membrane proteins composed of an alpha chain and a beta chain. This gene encodes the integrin alpha 5 chain. Alpha chain 5 undergoes post-translational cleavage in the extracellular domain to yield disulfide-linked light and heavy chains that join with beta 1 to form a fibronectin receptor. In addition to adhesion, integrins are known to participate in cell-surface mediated signalling.

### Overview

Product Name	Anti-Integrin alpha 5/ITGA5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Integrin alpha 5/ITGA5 Antibody Picoband™ catalog # A01911. Tested in ELISA, Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg NaN <sub>3</sub> .
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	P08648

### Technical Details

Immunogen	E. coli-derived human Integrin alpha 5 recombinant protein (Position: F42-A263).
Predicted Reactive Species	Human
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) 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**

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

Immunofluorescence, 2ug/ml

Immunocytochemistry/Immunofluorescence, 2ug/ml

Flow Cytometry, 1-3ug/1x10<sup>6</sup> cells

Direct ELISA, 0.1-0.5ug/ml

## Anti-Integrin alpha 5/ITGA5 Antibody Picoband™ (A01911) Images

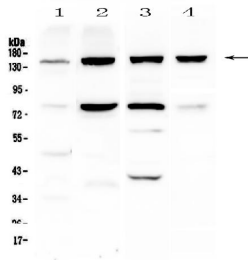


Figure 1. Western blot analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911).

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 50ug of sample under reducing conditions.

Lane 1: human Hela cell lysate,

Lane 2: human HepG2 cell lysate,

Lane 3: rat liver tissue lysate,

Lane 4: mouse liver tissue lysate.

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Integrin alpha 5 antigen affinity purified polyclonal antibody (Catalog # A01911) 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 1:10000 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 Integrin alpha 5 at approximately 150KD. The expected band size for Integrin alpha 5 is at 115KD.

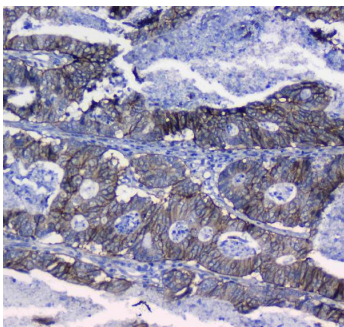


Figure 2. IHC analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911).

Integrin alpha 5 was detected in paraffin-embedded section of human colon cancer 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 1ug/ml rabbit anti-Integrin alpha 5 Antibody (A01911) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

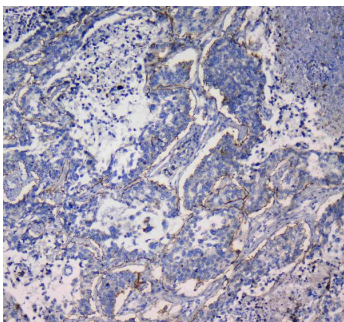
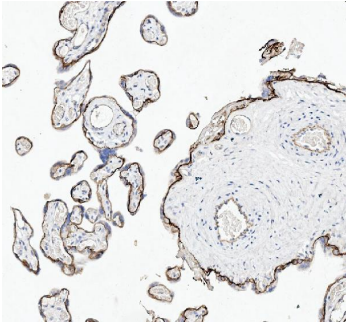
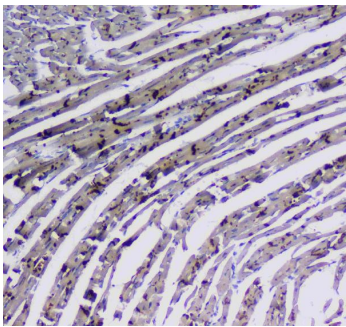


Figure 3. IHC analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911).

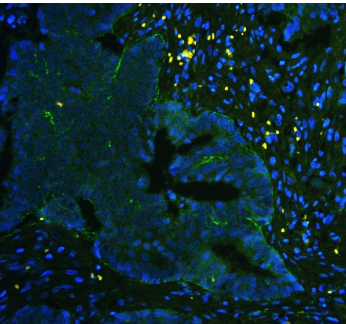
Integrin alpha 5 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Integrin alpha 5 Antibody (A01911) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



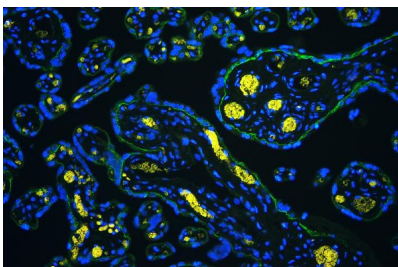
**Figure 4. IHC analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911).**  
Integrin alpha 5 was detected in paraffin-embedded section of human placenta tissue . Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Integrin alpha 5 Antibody (A01911) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



**Figure 5. IHC analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911).**  
Integrin alpha 5 was detected in paraffin-embedded section of rat cardiac muscle 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 1ug/ml rabbit anti-Integrin alpha 5 Antibody (A01911) 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 Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



**Figure 6. IF analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911)**  
Integrin alpha 5 was detected in paraffin-embedded section of human colon cancer tissues. 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 1ug/mL rabbit anti-Integrin alpha 5 Antibody (A01911) 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 7. IF analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911)**  
Integrin alpha 5 was detected in paraffin-embedded section of human placenta tissues. 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 1ug/mL rabbit anti-Integrin alpha 5 Antibody (A01911) 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.

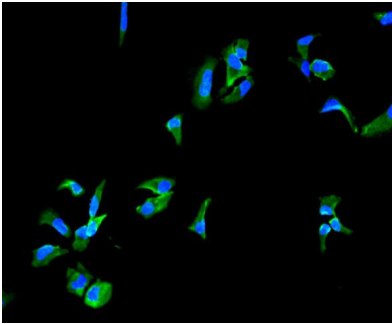


Figure 8. IF analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911). Integrin alpha 5 was detected in immunocytochemical section of HeLa cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Integrin alpha 5 Antibody (A01911) 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.

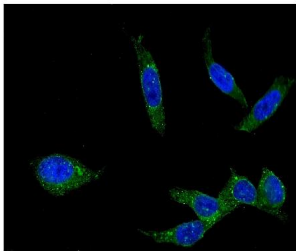


Figure 9. IF analysis of Integrin alpha 5 using anti-Integrin alpha 5 antibody (A01911). Integrin alpha 5 was detected in immunocytochemical section of U2OS cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Integrin alpha 5 Antibody (A01911) 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.

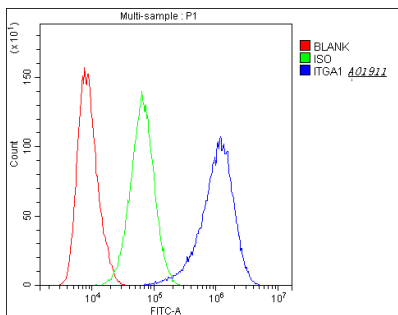


Figure 10. Flow Cytometry analysis of A431 cells using anti-Integrin alpha 5 antibody (A01911).

Overlay histogram showing A431 cells stained with A01911 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Integrin alpha 5 Antibody (A01911, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

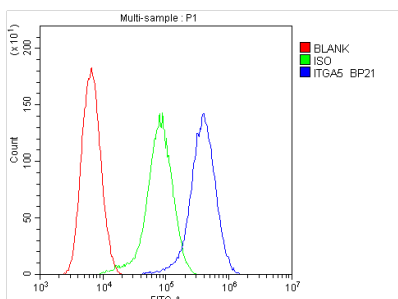


Figure 11. Flow Cytometry analysis of HT-1080 cells using anti-Integrin alpha 5 antibody (A01911).

Overlay histogram showing HT-1080 cells stained with A01911 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Integrin alpha 5 Antibody (A01911, 1ug/1x10<sup>6</sup> cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10<sup>6</sup> cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10<sup>6</sup>) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

## 5 Publications Citing This Product

1. PubMed ID: 10.1016/j.ijcard.2013.01.239, Calreticulin overexpression correlates with integrin-alpha5 and transforming growth factor-beta1 expression in the atria of patients with rheumatic valvular disease and atrial fibrillation
2. PubMed ID: 19918321, Characterization of Rat Hair Follicle Stem Cells Selected by Vario Magnetic Activated Cell Sorting System
3. PubMed ID: 26680220, Silencing of Paternally Expressed Gene 10 Inhibits Trophoblast Proliferation and Invasion

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