

Anti-Integrin alpha 3/ITGA3 Antibody Picoband®

Catalog Number: A02902

About ITGA3

ITGA3 (INTEGRIN, ALPHA-3), also called CD49C, VLA3 or GAPB3, is a protein that in humans is encoded by the ITGA3 gene. It is an integrin alpha subunit which is also a member of the family of cell surface adhesion molecules. This gene is mapped to chromosome 17 and its exact cytogenetic location is 17q21.33. ITGA3 makes up half of the alpha3beta1 integrin duplex that plays a role in neural migration and corticogenesis together with beta-1 subunit. A functional link between DAB1 phosphorylation and ITGA3 signaling drives the timely detachment of migrating neurons from radial glial fibers. Expression of human ITGA3 increased the infectivity of virus for Chinese hamster ovary cells. ITGA3 also contains 13 potential N-glycosylation sites, 2 potential cleavage sites, and the 7 N-terminal repeating units characteristic of ITGAs. Recombinant ITGA3 is expressed as a 150-kD protein as the same size as the native protein by the western blot analysis.

Overview

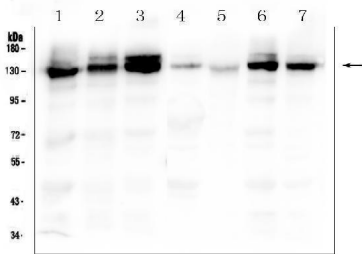
Product Name	Anti-Integrin alpha 3/ITGA3 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Integrin alpha 3/ITGA3 Antibody Picoband® catalog # A02902. Tested in Flow Cytometry, IF, IHC, IHC-F, ICC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand 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, IHC-F, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	P26006

Technical Details

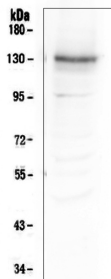
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human Integrin alpha 3, which shares 91.2% amino acid (aa) sequence identity with both mouse and rat Integrin alpha 3.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) 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
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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml Immunohistochemistry (Frozen Section), 0.5-1ug/ml Immunocytochemistry/Immunofluorescence, 2ug/ml Flow Cytometry (Fixed), 1-3ug/1x10 ⁶ cells

Anti-Integrin alpha 3/ITGA3 Antibody Picoband® (A02902) Images

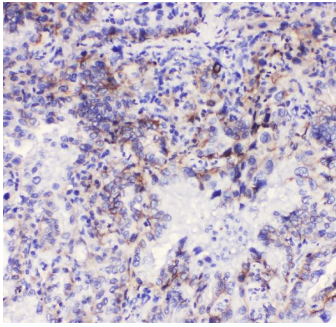


Western blot analysis of Integrin alpha 3 using anti-Integrin alpha 3 antibody (A02902). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: human A549 whole cell lysate, Lane 2: human PC-3 whole cell lysate, Lane 3: human A431 whole cell lysate, Lane 4: human placenta tissue lysates, Lane 5: human SHG-44 whole cell lysate, Lane 6: human U20S whole cell lysate, Lane 7: human HeLa whole cell 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 3 antigen affinity purified polyclonal antibody (Catalog # A02902) 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 3 at approximately 130KD. The expected band size for Integrin alpha 3 is at 116KD.

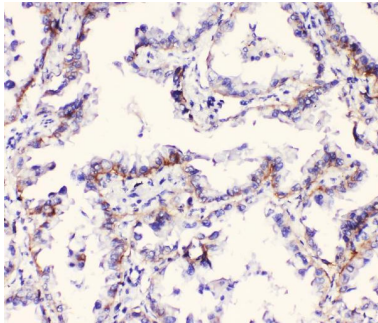


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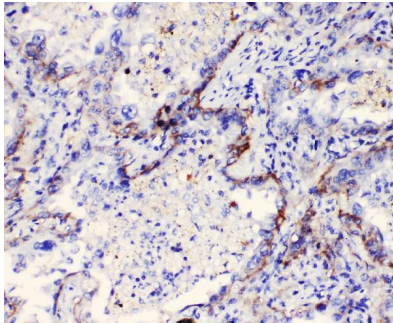
IHC analysis of Integrin alpha 3 using anti-Integrin alpha 3 antibody (A02902). Integrin alpha 3 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-Integrin alpha 3 Antibody (A02902) overnight at 4°C. Biotinylated



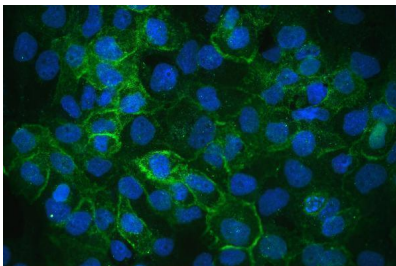
goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.



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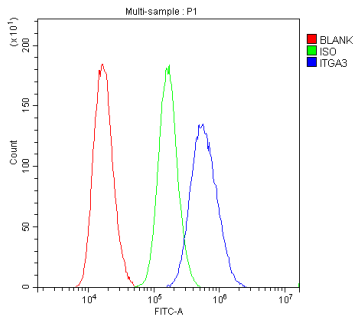


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IF analysis of Integrin alpha 3 using anti-Integrin alpha 3 antibody (A02902). Integrin alpha 3 was detected in immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2ug/mL rabbit anti-Integrin alpha 3 Antibody (A02902) 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 Flow Cytometry analysis of U87 cells using anti-Integrin alpha 3 antibody (A02902). Overlay histogram showing U87 cells stained with A02902 (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-Integrin alpha 3 Antibody (A02902, 1ug/1x10⁶ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/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-Integrin alpha 3/ITGA3 Antibody

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