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Anti-Integrin alpha 3/ITGA3 Antibody

Catalog Number: PA1621

About ITGA3

ITGA3 (INTEGRIN, ALPHA-3), also called CD49C, VLA3 or GAPB3, is a protein that in humans is encoded by the ITGA3 gene. ITGA3 is an integrin alpha subunit which is also a member of the family of cell surface adhesion molecules. ITGA3 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
Reactive Species	Human, Rat
Description	Boster Bio Anti-Integrin alpha 3/ITGA3 Antibody catalog # PA1621. Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human, Rat.
Application	Flow Cytometry, IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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, identical to the related rat and mouse sequences.
Predicted Reactive Species	Chicken
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

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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, Human, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, By Heat Immunocytochemistry/Immunofluorescence, 5 ug/ml, Human Flow Cytometry(Fixed), 1-3 ug/1x10^6 cells, Human

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Anti-Integrin alpha 3/ITGA3 Antibody (PA1621) Images

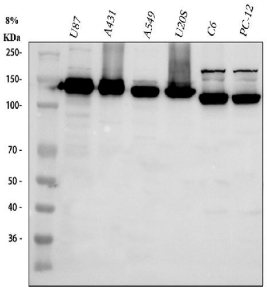

Figure 1. Western blot analysis of ITGA3 using anti-ITGA3 antibody (PA1621).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human U87 whole cell lysates,
Lane 2: human A431 whole cell lysates,
Lane 3: human A549 whole cell lysates,
Lane 4: human U2OS whole cell lysates,
Lane 5: rat C6 whole cell lysates,
Lane 6: rat PC-12 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-ITGA3 antigen affinity purified polyclonal antibody (Catalog # PA1621) 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 ITGA3 at approximately 130 kDa. The expected band size for ITGA3 is at 117 kDa.

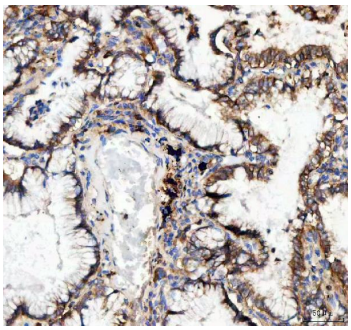

Figure 2. IHC analysis of ITGA3 using anti-ITGA3 antibody (PA1621).
ITGA3 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ITGA3 Antibody (PA1621) 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.

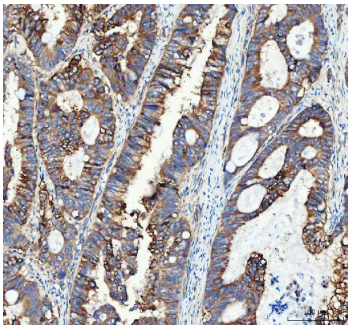

Figure 3. IHC analysis of ITGA3 using anti-ITGA3 antibody (PA1621).
ITGA3 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-ITGA3 Antibody (PA1621) 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.

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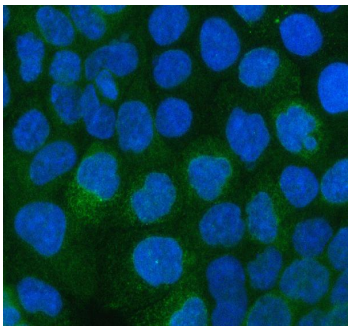

Figure 4. IF analysis of SHP2/PTPN11 using anti-SHP2/PTPN11 antibody (PA1621).
SHP2/PTPN11 was detected in an immunocytochemical section of A431 cells. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 5 ug/mL rabbit anti-SHP2/PTPN11 Antibody (PA1621) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) was used as secondary antibody at 1:500 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.

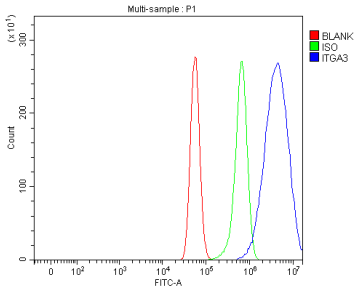

Figure 5. Flow Cytometry analysis of U87 cells using anti-SMC4 antibody (PA1621).
Overlay histogram showing U87 cells stained with PA1621 (Blue line). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with rabbit anti-SMC4 Antibody (PA1621, 1 ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

1 Publications Citing This Product

1. PubMed ID: 32544337, Li H,Yuan L,Long Y,Fang H,Li M,Liu Q,Xia X,Qin C,Zhang Y,Lan X,Gai Y.Synthesis and Preclinical Evaluation of a 68Ga-Radiolabeled Peptide Targeting Very Late Antigen-3 for PET Imaging of Pancreatic Cancer.Mol Pharm.2020 Aug 3;17(8):3000-3008.doi:10.1021/ac

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