

Rabbit Integrin beta 4/ITGB4 Polyclonal Antibody | anti-ITGB4 antibody

Anti-Integrin beta 4/ITGB4 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA125585	Rabbit	Human, Mouse, Rat	ELISA, Flow Cytometry, Functional Assay, Immunohistochemistry, Western Blot

PRODUCT SYNONYMS

Integrin beta 4/ITGB4; Polyclonal Antibody; Anti-Integrin beta 4/ITGB4 Antibody; Integrin beta-4; GP150; CD antigen CD104; ITGB4; integrin; beta 4; anti-ITGB4 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	Rabbit IgG
Specificity	Rabbit IgG polyclonal antibody for Integrin beta 4/ITGB4 detection.
Purity/Purification	Immunogen affinity purified.
Form/Format	Lyophilized. Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.01mg NaN3.
Applicable Applications for anti-ITGB4 antibody	ELISA (Direct ELISA), FCM/FACS (Flow Cytometry), IHC (Immunohistochemistry), WB (Western Blot)
Immunogen	E Coli-derived human Integrin beta 4/ITGB4 recombinant protein (Position: R29-K431).
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.
Recommended Detection Systems	Recommended Detection Systems
Preparation and Storage	Store at -20 degree C for one year. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for a longer time. Avoid repeated freezing and thawing.



WB (Western Blot)

Figure 1. Western blot analysis of Integrin beta 4/ITGB4 using anti-Integrin beta 4/ITGB4 antibody (AAA125585).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 lysatesLane 2: human PC-3 whole cell lysatesLane 3: human T-47D whole cell lysatesLane 4: human Hela whole cell lysatesLane 5: human SW620 whole cell lysatesLane 6: human CACO-2 whole cell lysatesLane 7: rat ovary tissue lysatesLane 8: mouse ovary tissue lysates.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 beta 4/ITGB4 antigen affinity purified polyclonal antibody (Catalog # AAA125585) at 0. 25 μg/mL overnight at 4 degree 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 with Tanon 5200 system. A specific band was detected for Integrin beta 4/ITGB4 at approximately 210KD. The expected band size for Integrin beta 4/ITGB4 is at 210KD.



IHC (Immunohistochemistry)

Figure 4. IF analysis of Integrin beta 4/ITGB4 using anti- Integrin beta 4/ITGB4 antibody (AAA125585).Integrin beta 4/ITGB4 was detected in paraffin-embedded section of human intestinal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 4μg/mL rabbit anti- Integrin beta 4/ITGB4 Antibody (AAA125585) overnight at 4 degree C. DyLight®488 Conjugated Goat Anti-Rabbit IgG was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37 degree C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.



IHC (Immunohistochemistry)

Figure 2. IHC analysis of Integrin beta 4/ITGB4 using anti-Integrin beta 4/ITGB4 antibody (AAA125585).Integrin beta 4/ITGB4 was detected in paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml rabbit anti-Integrin beta 4/ITGB4 Antibody (AAA125585) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.



FCM/FACS (Flow Cytometry)

Figure 5. Flow Cytometry analysis of Raji cells using anti-Integrin beta 4/ITGB4 antibody (AAA125585).Overlay histogram showing Raji cells stained with AAA125585 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-Integrin beta 4/ITGB4 Antibody (AAA125585,1μg/1x106 cells) for 30 min at 20 degree C. DyLight®488 conjugated goat anti-rabbit IgG (5-10μg/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1μg/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.



IHC (Immunohistochemistry)

Figure 3. IHC analysis of Integrin beta 4/ITGB4 using anti-Integrin beta 4/ITGB4 antibody (AAA125585).Integrin beta 4/ITGB4 was detected in paraffin-embedded section of human rectal cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8. 0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1μg/ml rabbit anti-Integrin beta 4/ITGB4 Antibody (AAA125585) overnight at 4 degree C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37 degree C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) with DAB as the chromogen.

ADDITIONAL INFORMATION

Related Product Information for anti-ITGB4 antibody

ITGB4(Integrin, beta-4), also known as CD104 (Cluster of Differentiation 104), is a human gene. The gene encodes the integrin beta 4 subunits, a receptor for the laminins. This subunit tends to associate with alpha 6 subunits and is likely to play a pivotal role in the biology of invasive carcinoma. The ITGB4 gene is mapped on 17q25. 1. Using expression profiling, Yang et al. found that ITGB4 was upregulated 6-fold by ZKSCAN3 in transfected human colon cancer cells compared with parental cells. They confirmed that ZKSCAN3 bound the promoter of ITGB4 in vitro and in vivo. ITGB4 knockdown by short hairpin RNA countered ZKSCAN3-augmented anchorage-independent colony formation in the colon cancer cell lines. The integrin beta-4 subunit is characterized by an unusually long cytoplasmic domain that harbors 4 fibronectin type III (FNIII) repeats, residing in 2 pairs separated by a connecting segment. Vidal et al. found compound heterozygosity for mutations in the ITGB4 gene in an infant with junctional epidermolysis bullosa associated with pyloric atresia.

References	1. Carmi, R., Sofer, S., Karplus, M., Ben-Yakar, Y., Mahler, D., Zirkkin, H., Bar-Ziv, J. Aplasia cutis congenita in two sibs discordant for pyloric atresia. Am. J. Med. Genet. 11: 319-328, 1982. 2. Dajee, M., Lazarov, M., Zhang, J. Y., Cai, T., Green, C. L., Russell, A. J., Marinkovich, M. P., Tao, S., Lin, Q., Kubo, Y., Khavari, P. A. NF-kappa-B blockade and oncogenic Ras trigger invasive human epidermal neoplasia. Nature 421: 639-643, 2003. 3. Geerts, D., Fontao, L., Nievers, M. G., Schaapveld, R. Q. J., Purkis, P. E., Wheeler, G. N., Lane, E. B., Leigh, I. M., Sonnenberg, A. Binding of integrin alpha-6-beta-4 to plectin prevents plectin association with F-actin but does not interfere with intermediate filament binding. J. Cell Biol. 147: 417-434, 1999.
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NCBI AND UNIPROT INFORMATION

NCBI GI #	54607035
NCBI GeneID	3691
NCBI Accession #	NP_000204.3
NCBI GenBank Nucleotide #	NM_000213.3
UniProt Accession #	P16144; O14690; O14691; O15339; O15340; O15341; Q9UIQ4; A0AVL6
Molecular Weight	202,167 Da
NCBI Official Full Name	integrin beta-4 isoform 1
NCBI Official Synonym Full Names	integrin, beta 4
NCBI Official Symbol	ITGB4
NCBI Official Synonym Symbols	CD104
NCBI Protein Information	integrin beta-4; GP150; CD104 antigen; integrin beta-4 subunit
UniProt Protein Name	Integrin beta-4
UniProt Gene Name	ITGB4
UniProt Entry Name	ITB4_HUMAN

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.