

Rabbit Integrin beta1 Polyclonal Antibody | anti-ITGB1 antibody

Integrin beta1 Antibody

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA322028	Rabbit	Human, Mouse, Rat	ELISA, Immunocytochemistry, Immunofluorescence, Western Blot

PRODUCT SYNONYMS

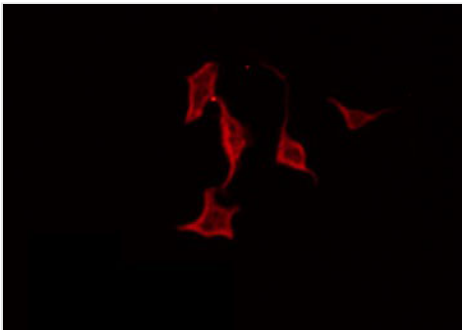
Integrin beta1; Polyclonal Antibody; Integrin beta1 Antibody; beta1 integrin; CD29; Fibronectin receptor subunit beta; FNRB; Glycoprotein IIa; GP IIa; GPIIA; Integrin beta-1; Integrin subunit beta 1; integrin VLA-4 beta subunit; Integrin; beta 1 (fibronectin receptor; beta polypeptide; antigen CD29 includes MDF2; MSK12); ITB1_HUMAN; ITGB1; MDF2; MSK12; OTTHUMP00000019420; Very late activation protein; VLA BETA; VLA-4 subunit beta; VLA-BETA; VLAB; VLABeta; anti-ITGB1 antibody

PRODUCT SPECIFICATIONS

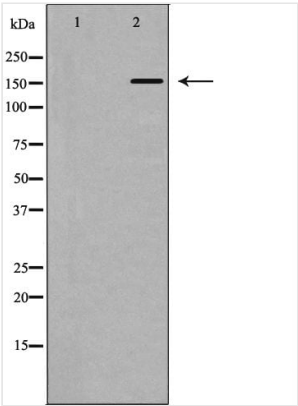
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Isotype	IgG
Specificity	Integrin beta1 antibody detects endogenous levels of total Integrin beta1
Purity/Purification	The antiserum was purified by peptide affinity chromatography using SulfoLink Coupling Resin.
Form/Format	Liquid Phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Concentration	1mg/ml (varies by lot)
Sequence Length	798
Applicable Applications for anti-ITGB1 antibody	ELISA, ICC (Immunocytochemistry), IF (Immunofluorescence), WB (Western Blot)
Immunogen	A synthesized peptide derived from human Integrin beta1
Subcellular Location	Cell Membrane, Sarcolemma. Cell Junction. In cardiac muscle, isoform 5 is found in costameres and intercalated disks and cell membrane. Cell Projection, Invadopodium Membrane. Cell Projection, Ruffle Membrane. Recycling Endosome. Melanosome. Cleavage Furrow. Cell Projection, Lamellipodium. Cell Projection, Ruffle. Cell Junction, Focal Adhesion. Cell Surface. Isoform 2 does not localize to focal adhesions. Highly enriched in stage I melanosomes. Located on plasma membrane of neuroblastoma NMB7 cells. In a lung cancer cell line, in prometaphase and metaphase, localizes diffusely at the membrane and in a few intracellular vesicles. In early telophase, detected mainly on the matrix-facing side of the cells. By mid-telophase, concentrated to the ingressing cleavage furrow, mainly to the basal side of the furrow. In late telophase, concentrated to the extending protrusions formed at the opposite ends of the spreading daughter cells, in vesicles at the base of the lamellipodia formed by the separating daughter cells. Colocalizes with ITGB1BP1 and metastatic suppressor protein NME2 at the edge or peripheral ruffles and lamellipodia during the early stages of cell spreading on fibronectin or collagen. Translocates from peripheral focal adhesions sites to fibrillar adhesions in a ITGB1BP1-dependent manner. Enriched preferentially at invadopodia, cell membrane protrusions that correspond to sites of cell invasion, in a collagen-dependent manner. Localized at plasma and ruffle membranes in a collagen-independent manner.

Tissue Specificity	Isoform 1 is widely expressed, other isoforms are generally coexpressed with a more restricted distribution. Isoform 2 is expressed in skin, liver, skeletal muscle, cardiac muscle, placenta, umbilical vein endothelial cells, neuroblastoma cells, lymphoma cells, hepatoma cells and astrocytoma cells. Isoform 3 and isoform 4 are expressed in muscle, kidney, liver, placenta, cervical epithelium, umbilical vein endothelial cells, fibroblast cells, embryonal kidney cells, platelets and several blood cell lines. Isoform 4, rather than isoform 3, is selectively expressed in peripheral T-cells. Isoform 3 is expressed in non-proliferating and differentiated prostate gland epithelial cells and in platelets, on the surface of erythroleukemia cells and in various hematopoietic cell lines. Isoform 5 is expressed specifically in striated muscle (skeletal and cardiac muscle).
Predicted Cross Reactivity	Pig, Bovine, Sheep, Rabbit, Dog, Chicken
Similarity	Pig (100%), Bovine (100%), Sheep (100%), Rabbit (100%), Dog (100%), Chicken (100%)
Conjugation	Unconjugated
Preparation and Storage	Store at -20 degree C. Stable for 12 months from date of receipt.

IMAGES



IF (Immunofluorescence)
 AAA322028 staining HeLa by IF/ICC. The sample were fixed with PFA and permeabilized in 0.1% Triton X-100, then blocked in 10% serum for 45 minutes at 25 degree C. The primary antibody was diluted at 1/200 and incubated with the sample for 1 hour at 37 degree C. An Alexa Fluor 594 conjugated goat anti-rabbit IgG (H+L) Ab, diluted at 1/600, was used as the secondary antibody.



WB (Western Blot)
 Western blot analysis of Integrin beta1 expression in Jurkat cells. The lane on the left is treated with the antigen-specific peptide.

ADDITIONAL INFORMATION

Related Product Information for anti-ITGB1 antibody	Function: Integrins alpha-1/beta-1, alpha-2/beta-1, alpha-10/beta-1 and alpha-11/beta-1 are receptors for collagen. Integrins alpha-1/beta-1 and alpha-2/beta-2 recognize the proline-hydroxylated sequence G-F-P-G-E-R in collagen. Integrins alpha-2/beta-1, alpha-3/beta-1, alpha-4/beta-1, alpha-5/beta-1, alpha-8/beta-1, alpha-10/beta-1, alpha-11/beta-1 and alpha-V/beta-1 are receptors for fibronectin. Alpha-4/beta-1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin alpha-5/beta-1 is a receptor for fibrinogen. Integrin alpha-1/beta-1, alpha-2/beta-1, alpha-6/beta-1 and alpha-7/beta-1 are receptors for laminin. Integrin alpha-4/beta-1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin alpha-9/beta-1 is a receptor for VCAM1, cytotactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytotactin. Integrin alpha-3/beta-1 is a receptor for epiligrin, thrombospondin and CSPG4. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin alpha-V/beta-1 is a receptor for vitronectin. Beta-1 integrins recognize the sequence R-G-D in a wide array of ligands. Isoform 2 interferes with isoform 1 resulting in a dominant negative effect on cell adhesion and migration (in vitro). When associated with alpha-7/beta-1 integrin, regulates cell adhesion and laminin matrix deposition. Involved in promoting endothelial cell motility and angiogenesis. Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules. May be involved in up-regulation of the activity of kinases such as PKC via binding to KRT1. Together with KRT1 and RACK1, serves as a platform for SRC activation or inactivation. Plays a mechanistic adhesive role during telophase, required for the successful completion of cytokinesis. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion. ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (PubMed:23125415, PubMed:24789099). ITGA4:ITGB1 and ITGA5:ITGB1 bind to PLA2G2A via a site (site 2) which is distinct from the classical ligand-binding site (site 1) and this induces integrin conformational changes and enhanced ligand binding to site 1 (PubMed:18635536, PubMed:25398877). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G-D-dependent cell adhesion to FBN1 (PubMed:12807887, PubMed:17158881). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling (PubMed:29030430). Subunit Structure: Heterodimer of an alpha and a beta subunit. Beta-1 associates with either alpha-1, alpha-2, alpha-3, alpha-4, alpha-5, alpha-6, alpha-7, alpha-8, alpha-9, alpha-10, alpha-11 or alpha-V. Interacts with seprase FAP (seprase); the interaction occurs at the cell surface of invadopodia membrane in a collagen-dependent manner. Binds LGALS3BP and NMRK2, when associated with alpha-7, but not with alpha-5. Interacts with FGR and HCK. Interacts (via the cytoplasmic region) with RAB25 (via the hypervariable C-terminal region). Interacts with RAB21. Interacts with KRT1 in the presence of RACK1 and SRC. Interacts with JAML; integrin alpha-4/beta-1 may regulate leukocyte to endothelial cells adhesion by controlling JAML homodimerization. Interacts with FLNA, FLNB and RANBP9. Isoform 5 interacts with ACE2. Isoform 1 interacts with the C-terminal region of FLNC. Interacts with MYO10. Interacts with DAB2. Interacts with FERMT2; the interaction is inhibited in presence of ITGB1BP1. Interacts with ITGB1BP1 (via C-terminal region); the interaction is a prerequisite for focal adhesion disassembly. Interacts with TLN1; the interaction is prevented by competitive binding of ITGB1BP1. Interacts with ACAP1; required for ITGB1 recycling. Interacts with ASAP3. Isoform 5 interacts with alpha-7A and alpha-7B in adult skeletal muscle. Isoform 5 interacts with alpha-7B in cardiomyocytes of adult heart. Interacts with EMP2; the interaction may be direct or indirect and ITGB1 has an heterodimer form (By similarity). ITGA5:ITGB1 interacts with NOV. ITGA4:ITGB1 is found in a ternary complex with CX3CR1 and CX3CL1 (PubMed:23125415). ITGA5:ITGB1 interacts with FBN1 (PubMed:12807887, PubMed:17158881). ITGA5:ITGB1 interacts with IL1B (PubMed:29030430). Post-translational Modifications: The cysteine residues are involved in intrachain disulfide bonds. Similarity: Belongs to the integrin beta chain family.
References	Sun L, Xu X, Chen Y, Zhou Y, Tan R, Qiu H, Jin L, Zhang W, Fan R, Hong W, Wang T; Journal: Oncogene. Rab34 regulates adhesion, migration, and invasion of breast cancer cells.

NCBI AND UNIPROT INFORMATION

NCBI GI #	19743813
NCBI GeneID	3688
NCBI Accession #	NP_002202.2
NCBI GenBank Nucleotide #	NM_002211.3
UniProt Accession #	P05556; P78466; P78467; Q13089; Q13090; Q13091; Q13212; A8K6N2; D3DRX9; D3DRY3; D3DRY4; D3DRY5

Molecular Weight	Observed: 160 kDa Predicted: 89 kDa
NCBI Official Full Name	integrin beta-1 isoform 1A
NCBI Official Synonym Full Names	integrin subunit beta 1
NCBI Official Symbol	ITGB1
NCBI Official Synonym Symbols	CD29; FNRB; MDF2; VLAB; GPIIA; MSK12; VLA-BETA
NCBI Protein Information	integrin beta-1
UniProt Protein Name	Integrin beta-1
UniProt Gene Name	ITGB1
UniProt Synonym Gene Names	FNRB; MDF2; MSK12; GPIIA

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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/integrin-beta1-antibody-immunocytochemistry-immunofluorescence-western-blot-elisa/322028>