

Rabbit ITGB1 Polyclonal Antibody | anti-ITGB1 antibody

ITGB1 Antibody (C-term)

CATALOG #	HOST	REACTIVITY	APPLICATIONS
AAA285080	Rabbit	Human (Predicted Reactivity: Xenopus, Bovine, Chicken, Mouse, Pig, Rat, Sheep)	ELISA, Western Blot

PRODUCT SYNONYMS

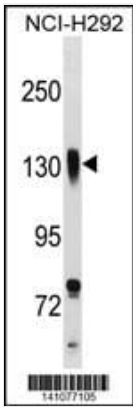
ITGB1; Polyclonal Antibody; ITGB1 Antibody (C-term); Integrin beta-1; Fibronectin receptor subunit beta; Glycoprotein IIa; GPIIA; VLA-4 subunit beta; CD29; FNBR; MDF2; MSK12; anti-ITGB1 antibody

PRODUCT SPECIFICATIONS

Host	Rabbit
Reactivity	Human (Predicted Reactivity: Xenopus, Bovine, Chicken, Mouse, Pig, Rat, Sheep)
Clonality	Polyclonal
Isotype	Rabbit Ig
Specificity	This ITGB1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 759-785 amino acids from the C-terminal region of human ITGB1.
Purity/Purification	Peptide Affinity Purified Rabbit Polyclonal Antibody (Pab)
Form/Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Sequence Positions	759-785
Sequence Length	801
Applicable Applications for anti-ITGB1 antibody	ELISA, WB (Western Blot)
Antigen Type	Synthetic Peptide

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-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (By similarity). 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, cytactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytactin. 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. When associated with alpha-7 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). ITGA5:ITGB3 is a receptor for soluble CD40LG and is required for CD40/CD40LG signaling (PubMed:31331973).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Cell projection, invadopodium membrane; Single-pass type I membrane protein. Cell projection, ruffle membrane; Single-pass type I membrane protein. Recycling endosome Melanosome. Cleavage furrow. Cell projection, lamellipodium. Cell projection, ruffle. Cell junction, focal adhesion. Cell surface. Note=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 Location	[Isoform 1]: Widely expressed, other isoforms are generally coexpressed with a more restricted distribution [Isoform 3]: Together with isoform 4, is expressed in muscle, kidney, liver, placenta, cervical epithelium, umbilical vein endothelial cells, fibroblast cells, embryonal kidney cells, platelets and several blood cell lines. 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]: Expressed specifically in striated muscle (skeletal and cardiac muscle).
Preparation and Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

IMAGES



WB (Western Blot)
ITGB1 Antibody (C-term) western blot analysis in NCI-H292 cell line lysates (35ug/lane). This demonstrates the ITGB1 antibody detected the ITGB1 protein (arrow).

ADDITIONAL INFORMATION

Related Product Information for anti-ITGB1 antibody	Integrins are heterodimeric proteins made up of alpha and beta subunits. At least 18 alpha and 8 beta subunits have been described in mammals. Integrin family members are membrane receptors involved in cell adhesion and recognition in a variety of processes including embryogenesis, hemostasis, tissue repair, immune response and metastatic diffusion of tumor cells. This gene encodes a beta subunit. Multiple alternatively spliced transcript variants which encode different protein isoforms have been found for this gene.
Product Categories/Family for anti-ITGB1 antibody	Cancer; Cardiovascular; Developmental Biology; Immunology; Neuroscience; Signal Transduction
References	Martchenko, M., et al. Proc. Natl. Acad. Sci. U.S.A. 107(35):15583-15588(2010) Caicedo-Carvajal, C.E., et al. PLoS ONE 5 (7), E11830 (2010) : Rikova, K., et al. Cell 131(6):1190-1203(2007) Seales, E.C., et al. J. Biol. Chem. 280(45):37610-37615(2005) Armulik, A. Front. Biosci. 7, D219-D227 (2002) :

NCBI AND UNIPROT INFORMATION

NCBI GI #	19743813
NCBI GeneID	3688
NCBI Accession #	NP_002202.2; NP_391988.1; NP_596867.1
NCBI GenBank Nucleotide #	NM_002211.3
UniProt Accession #	P05556; P78466; P78467; Q13089; Q13090; Q13091; Q13212; A8K6N2; D3DRX9; D3DRY3; D3DRY4; D3DRY5
NCBI Official Full Name	integrin beta-1 isoform 1A
NCBI Official Synonym Full Names	integrin, beta 1 (fibronectin receptor, beta polypeptide, antigen CD29 includes MDF2, MSK12)
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
UniProt Entry Name	ITB1_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.

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Online datasheet: <https://stage.aaabiotech.com/polyclonal/itgb1-antibody-western-blot-elisa/285080>