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Itgb1 antibody - C-terminal region

Rabbit Polyclonal Antibody
Catalog # AI14330

Product Information

Application	WB, IHC
Primary Accession	P09055
Other Accession	NM_010578, NP_034708
Reactivity	Human, Mouse, Rat, Rabbit, Zebrafish, Pig, Goat, Dog, Guinea Pig, Horse, Bovine, Sheep
Predicted	Mouse, Rat, Rabbit, Zebrafish, Pig, Chicken, Dog, Guinea Pig, Horse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	88231

Additional Information

Gene ID	16412
Alias Symbol	4633401G24Rik, AA409975, AA960159, CD29, Fnrb, gpIIa, Gm9863, ENSMUSG00000051907
Other Names	Integrin beta-1, Fibronectin receptor subunit beta, VLA-4 subunit beta, CD29, Itgb1
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Itgb1 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Itgb1 antibody - C-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	Itgb1 {ECO:0000312|MGI:MGI:96610}
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 lamimin. Integrin alpha-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (PubMed:10634791, PubMed:36812915). Integrin alpha- 4/beta-1 is a receptor for VCAM1 and 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. 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. 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/beta-1 integrin, regulates cell adhesion and laminin matrix deposition (PubMed:12941630). Involved in promoting endothelial cell motility and angiogenesis (PubMed:15181153). Involved in osteoblast compaction through the fibronectin fibrillogenesis cell-mediated matrix assembly process and the formation of mineralized bone nodules (PubMed:21768292). 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 (PubMed:18804435). ITGA4:ITGB1 binds to fractalkine (CX3CL1) and may act as its coreceptor in CX3CR1-dependent fractalkine signaling (By similarity). 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 (By similarity). ITGA5:ITGB1 acts as a receptor for fibrillin-1 (FBN1) and mediates R-G- D-dependent cell adhesion to FBN1 (By similarity). ITGA5:ITGB1 acts as a receptor for fibronectin FN1 and mediates R-G-D-dependent cell adhesion to FN1 (By similarity). ITGA5:ITGB1 is a receptor for IL1B and binding is essential for IL1B signaling (By similarity). ITGA5:ITGB3 is a receptor for soluble CD40LG and is required for CD40/CD40LG signaling (By similarity). ITGA5:ITGB1 acts as a receptor for SNED1 and mediates R-G-D-dependent cell adhesion to SNED1 (By similarity) Plays an important role in myoblast differentiation and fusion during skeletal myogenesis (By similarity). ITGA9:ITGB1 may play a crucial role in SVEP1/polydom-mediated myoblast cell adhesion (PubMed:22654117). Integrins ITGA9:ITGB1 and ITGA4:ITGB1 repress PRKCA-mediated L-type voltage-gated channel Ca(2+) influx and ROCK-mediated calcium sensitivity in vascular smooth muscle cells via their interaction with SVEP1, thereby inhibit vasocontraction (PubMed:35802072).

Cellular Location

Cell membrane {ECO:0000250|UniProtKB:P05556}; Single-pass type I membrane protein. Cell projection, invadopodium membrane {ECO:0000250|UniProtKB:P05556}; Single-pass type I membrane protein. Cell projection, ruffle membrane {ECO:0000250|UniProtKB:P05556}; Single-pass type I membrane protein. Recycling endosome. Melanosome {ECO:0000250|UniProtKB:P05556} Cell projection, lamellipodium {ECO:0000250|UniProtKB:P05556}. Cell projection, ruffle {ECO:0000250|UniProtKB:P05556}. Cell junction, focal adhesion {ECO:0000250|UniProtKB:P05556}. Note=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 to fibrillar adhesions in an 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. {ECO:0000250|UniProtKB:P05556}

Tissue Location

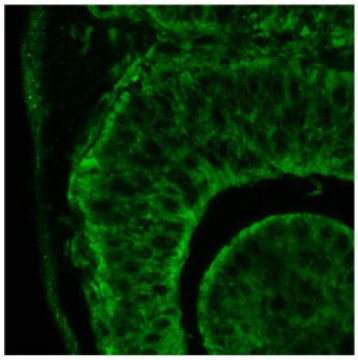
Expressed in the media layer of the arterial wall (at protein level). [Isoform 2]:

Expressed in skeletal and cardiac muscles only (at protein level).

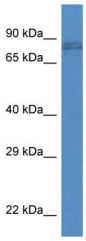
References

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Carninci P.,et al.Science 309:1559-1563(2005).
Church D.M.,et al.PLoS Biol. 7:E1000112-E1000112(2009).
Mural R.J.,et al.Submitted (JUL-2005) to the EMBL/GenBank/DDBJ databases.
Holers V.M.,et al.J. Exp. Med. 169:1589-1605(1989).

Images



Sample Type: Human Eye Section Stage 24 Dilution: 1:500



Itgb1 antibody - C-terminal region (AI14330) validated by WB using Mouse Heart lysate at 1.0µg/ml.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.