

Product name:	Integrin beta 1 (15X9) Rabbit Monoclonal Antibody
Cat number:	MABN12658
Conjugate:	Unconjugated
Size:	100μL
Clone:	Monoclonal
Concentration:	1mg/ml
Host:	Rabbit
Isotype:	IgG
Immunogen:	A synthetic peptide of human Integrin beta 1
Reactivity:	Human
Applications:	WB 1:500-1:2000,IHC 1:100-1:200
Molecular Weight:	88kDa
Purification:	Affinity purification
Form:	Liquid
Buffer:	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% New type preservative N and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage:	Store at 4°C short term. Aliquot and store at -20°C for 12 months. Avoid freeze/thaw cycles.

Background:

Integrins are α/β heterodimeric cell surface receptors that play a pivotal role in cell adhesion and migration, as well as in growth and survival. The integrin family contains at least 18 α and 8 β subunits that form 24 known integrins with distinct tissue distribution and overlapping ligand specificities. Integrins α -1/ β -1, α -2/ β -1, α -10/ β -1 and α -11/ β -1 are receptors for collagen. Integrins α -1/ β -1 and α -2/ β -2 recognize the proline-hydroxylated sequence G-F-P-G- E-R in collagen. Integrins α -2/ β -1, α -3/ β -1, α -4/ β -1, α -5/ β -1, α -8/ β -1, α -10/ β -1, α -11/ β -1 and α -V/ β -1 are receptors for fibronectin. α -4/ β -1 recognizes one or more domains within the alternatively spliced CS-1 and CS-5 regions of fibronectin. Integrin α -5/ β -1 is a receptor for fibrinogen. Integrin α -1/ β -1, α -2/ β -1, α -6/ β -1 and α -7/ β -1 are receptors for laminin. Integrin α -6/ β -1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (By similarity). Integrin α -4/ β -1 is a receptor for VCAM1. It recognizes the sequence Q-I-D-S in VCAM1. Integrin α -9/ β -1 is a receptor for VCAM1, cytactin and osteopontin. It recognizes the sequence A-E-I-D-G-I-E-L in cytactin. Integrin α -3/ β -1 is a receptor for epiligrin, thrombospondin and CSPG4. α -3/ β -1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. Integrin α -V/ β -1 is a receptor for vitronectin. β -1 integrins recognize the sequence R-G-D in a wide array of ligands. When associated with α -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 α -3/ β -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).