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ITGB2 Antibody

Mouse Monoclonal Antibody (Mab)
Catalog # AW5254

Product Information

Application	IHC-P, WB
Primary Accession	P05107
Other Accession	NP_000202.2
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Calculated MW	84791
Isotype	IgG1
Antigen Source	HUMAN

Additional Information

Gene ID	3689
Antigen Region	39-392
Other Names	ITGB2; CD18; MFI7; Integrin beta-2; Cell surface adhesion glycoproteins LFA-1/CR3/p150, 95 subunit beta; Complement receptor C3 subunit beta; CD_antigen=CD18; Flags: Precursor
Dilution	IHC-P~~1:100~500 WB~~ 1:1000
Target/Specificity	Purified His-tagged ITGB2 protein(Fragment) was used to produced this monoclonal antibody.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
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.
Precautions	ITGB2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ITGB2 (HGNC:6155)
Synonyms	CD18, MFI7

Function	Integrin ITGAL:ITGB2 is a receptor for ICAM1, ICAM2 and ICAM3 (PubMed:1676048, PubMed:23775590, PubMed:38195629). Integrin ITGAL:ITGB2 is also a receptor for the secreted form of ubiquitin-like protein ISG15; the interaction is mediated by ITGAL (PubMed:29100055). Integrins ITGAM:ITGB2 and ITGAX:ITGB2 are receptors for the iC3b fragment of the third complement component and for fibrinogen. Integrin ITGAX:ITGB2 recognizes the sequence G-P-R in fibrinogen alpha-chain. Integrin ITGAM:ITGB2 recognizes P1 and P2 peptides of fibrinogen gamma chain. Integrin ITGAM:ITGB2 is also a receptor for factor X. Integrin ITGAD:ITGB2 is a receptor for ICAM3 and VCAM1 (PubMed:10438935, PubMed:8777714, PubMed:9841932). Contributes to natural killer cell cytotoxicity (PubMed:15356110). Involved in leukocyte adhesion and transmigration of leukocytes including T-cells and neutrophils (PubMed:11812992, PubMed:28807980). Triggers neutrophil transmigration during lung injury through PTK2B/PYK2-mediated activation (PubMed:18587400). Integrin ITGAL:ITGB2 in association with ICAM3, contributes to apoptotic neutrophil phagocytosis by macrophages (PubMed:23775590). In association with alpha subunit ITGAM/CD11b, required for CD177-PRTN3-mediated activation of TNF primed neutrophils (PubMed:21193407). Integrins ITGAX:ITGB2 functions as a receptor of the erythrocyte-specific adhesion molecule ICAM4 and mediates erythrophagocytosis (PubMed:16985175). Integrins ITGAX:ITGB2 functions as a receptor of the neuron-specific adhesion molecule ICAM5 ensuring neuron cell-leukocyte adhesion (PubMed:10741396). Integrin ITGAL:ITGB2 functions as a receptor of ICAM1 by acting as a platform at the immunological synapse to translate TCR engagement and density of the ITGAL ligand ICAM1 into graded adhesion (PubMed:38195629). Integrin ITGAM:ITGB2/MAC-1 complex functions as a signaling receptor for the ligand receptor ICAM1, ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (PubMed:1980124). Integrin ITGAL/ITGB2 that functions as a signaling receptor of ICAM2, ensuring leukocyte cell-cell adhesion on resting cells (PubMed:1676048).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Membrane raft; Single-pass type I membrane protein
Tissue Location	Leukocytes (PubMed:23775590). Expressed in neutrophils (at protein level) (PubMed:21193407, PubMed:28807980)

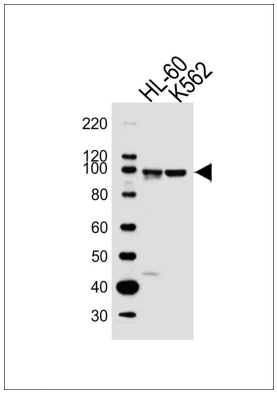
Background

The product of this gene belongs to the integrin beta chain family of proteins. Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. This gene encodes the integrin beta chain beta 2. A given chain may combine with multiple partners resulting in different integrins. For example, beta 2 combines with the alpha L chain to form the integrin LFA-1, and combines with the alpha M chain to form the integrin Mac-1. Integrins are known to participate in cell adhesion as well as cell-surface mediated signalling. Defects in this gene are the cause of leukocyte adhesion deficiency type I (LAD1). Two transcript variants encoding the same protein have been identified for this gene.

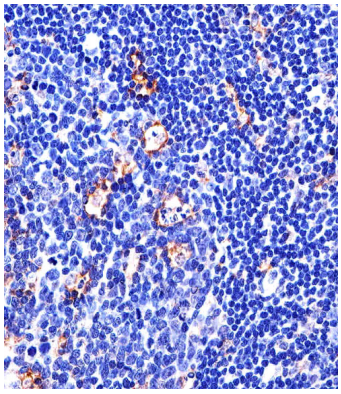
References

Gjelstrup, L.C., et al. J. Immunol. 185(7):4154-4168(2010)
Shimada, M., et al. Hum. Genet. 128(4):433-441(2010)
Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)
Chen, X., et al. Proc. Natl. Acad. Sci. U.S.A. 107(33):14727-14732(2010)
Pliyev, B.K., et al. Biochem. Biophys. Res. Commun. 397(2):277-282(2010)

Images



Western blot analysis of lysates from HL-60,K562 cell line (from left to right), using ITGB2 Antibody(Cat. #AW5254). AW5254 was diluted at 1:1000 at each lane. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody.



Immunohistochemical analysis of paraffin-embedded H. tonsil section using ITGB2 Antibody(Cat#AW5254). AW5254 was diluted at 1:25 dilution. A undiluted biotinylated goat polyvalent antibody was used as the secondary, followed by DAB staining.

Citations

- Differential miRNA expression profiles in human keratinocytes in response to protein kinase C inhibitor.