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CD18 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1286a

Product Information

Application	ICC, E
Primary Accession	P05107
Reactivity	Human, Mouse
Host	Mouse
Clonality	Monoclonal
Clone Names	10E12
Isotype	IgG2b
Calculated MW	84791
Description	CD18, also known as ITGB2 (integrin beta chain beta 2). Integrins are integral cell-surface proteins composed of an alpha chain and a beta chain. 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. CD18 is expressed by most leucocytes. 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.
Immunogen	Purified recombinant fragment of CD18 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	3689
Other Names	Integrin beta-2, Cell surface adhesion glycoproteins LFA-1/CR3/p150, 95 subunit beta, Complement receptor C3 subunit beta, CD18, ITGB2, CD18, MFI7
Dilution	ICC~~N/A E~~N/A
Storage	Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	CD18 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

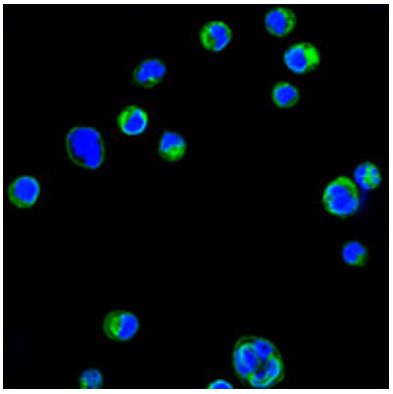
Name	ITGB2 (HGNC:6155)
Synonyms	CD18, MFI7
Function	Integrin ITGAL:ITGB2 is a receptor for ICAM1, ICAM2 and ICAM3 (PubMed:1676048, PubMed:23775590, PubMed:38195629). Integrin ITGAL:ITGB2 is also a receptor for the secreted form of ubiquitin-like protein ISG15; the interaction is mediated by ITGAL (PubMed:29100055). 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)

References

1. Microcirculation. 2008 Aug;15(6):555-67. 2. Mol Immunol. 2008 Feb;45(3):709-18. 3. J Biol Chem. 2007 Aug 17;282(33):24310-9.

Images

Figure 1: Confocal immunofluorescence analysis of HL60 cells using CD18 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.



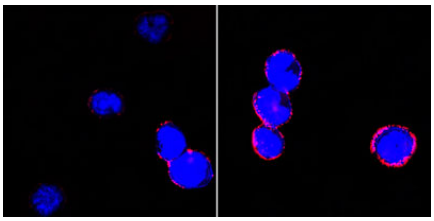


Figure 2: Confocal immunofluorescence analysis of BCBL-1 cells (left) and L1210 cells (right) using CD18 mouse mAb (red). Blue: DRAQ5 fluorescent DNA dye.

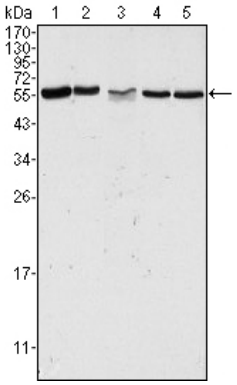


Figure 1: Western blot analysis using PAK2 mouse mAb against Hela (1), Jurkat (2), A549 (3), HEK293 (4) and K562 (5) cell lysate.

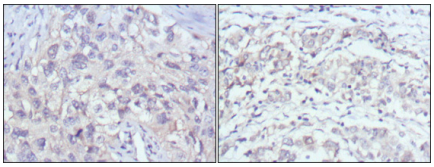


Figure 2: Immunohistochemical analysis of paraffin-embedded human lung cancer (left) and gastric cancer (right) using PAK2 mouse mAb with DAB staining.

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