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Anti-CD11b / MAC-1 (Microglial Marker) Antibody

Mouse Monoclonal Antibody
Catalog # AH13327

Product Information

Application	IF, FC
Primary Accession	P11215
Other Accession	172631
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	ITGAM/271
Calculated MW	127179

Additional Information

Gene ID	3684
Other Names	CD11 antigen-like family member B; CD11b/CD18; CD49d; Cell surface glycoprotein MAC-1 subunit alpha; Complement Component Receptor 3 Alpha; CR3 Alpha Chain (CR3A); Integrin alpha-M; Integrin beta 2 alpha subunit; ITGAM; Leukocyte adhesion receptor MO1; Ly-40; Mac-1a; MAC1; Mac1, alpha subunit; MAC1A; Macrophage antigen alpha polypeptide; MO1A; Neutrophil adherence receptor alpha M subunit
Application Note	Flow Cytometry (0.5-1ug/million cells in 0.1ml); Immunofluorescence (0.5-1ug/ml); Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-CD11b / MAC-1 (Microglial Marker) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ITGAM (HGNC:6149)
Synonyms	CD11B, CR3A
Function	Integrin ITGAM/ITGB2 is implicated in various adhesive interactions of monocytes, macrophages and granulocytes as well as in mediating the uptake

	of complement-coated particles and pathogens (PubMed:20008295, PubMed:9558116). It is identical with CR-3, the receptor for the iC3b fragment of the third complement component. It probably recognizes the R-G-D peptide in C3b. Integrin ITGAM/ITGB2 is also a receptor for fibrinogen and factor X. It recognizes P1 and P2 peptides of fibrinogen gamma chain. Regulates neutrophil migration (PubMed:28807980). In association with beta subunit ITGB2/CD18, required for CD177-PRTN3-mediated activation of TNF primed neutrophils (PubMed:21193407). Integrin ITGAM/ITGB2 is also a receptor for ICAM1 ligand ensuring adhesion between stimulated neutrophils and stimulated endothelial cells (PubMed:1980124). May regulate phagocytosis-induced apoptosis in extravasated neutrophils (By similarity). May play a role in mast cell development (By similarity). Required with TYROBP/DAP12 in microglia to control production of microglial superoxide ions which promote the neuronal apoptosis that occurs during brain development (By similarity).
Cellular Location	Cell membrane; Single-pass type I membrane protein. Membrane raft; Single-pass type I membrane protein
Tissue Location	Predominantly expressed in monocytes and granulocytes (PubMed:1346576). Expressed in neutrophils (at protein level) (PubMed:21193407).

Background

CD11b is a cell adhesion molecule that acts as a receptor for cell surface ligands such as intracellular adhesion molecules (ICAMs) or soluble ligands. Integrins are heterodimeric proteins that contain an a chain and b chain. Integrin □M combines with the Integrin ?2 to form a leukocyte-specific integrin referred to as macrophage receptor 1 (Mac-1), or inactivated-C3b (iC3b) receptor 3 (CR3). Integrin □M/?2 is important in the adherence of neutrophils and monocytes to stimulated endothelium, and also in the phagocytosis of complement coated particles. The protein CD11b has been implicated in the various adhesion-related interactions of cells such as monocytes, macrophages, natural killer (NK) cells, and granulocytes. It is part of a heterodimer that consists of CD11b and CD18. It also modulates the uptake of complement-coated particles within the cell. It is commonly used as a microglial marker in tissues derived from the nervous system.

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