



Product Specification Sheet

Mouse monoclonal Anti-Rat CD11b/c Antibodies and conjugates

Cat # RCD011b/c-M	Mouse Anti-Rat CD11b/c IgG, unlabeled	SIZE: 100 tests
Cat # RCD011b/c -B	Mouse Anti-Rat CD11b/c IgG, biotin conjugate	SIZE: 100 tests
Cat # RCD011b/c -F	Mouse Anti-Rat CD11b/c IgG, FITC conjugate	SIZE: 100 tests
Cat # RCD011b/c -PE	Mouse Anti-Rat CD11b/c IgG-R-PE conjugate	SIZE: 100 tests

Integrin alpha M (ITGAM) is one protein subunit that forms the heterodimeric integrin alpha-M beta-2 ($\alpha\text{M}\beta\text{2}$) molecule, also known as macrophage-1 antigen (Mac-1) or complement receptor 3 (CR3).[1] ITGAM is also known as CR3A, and cluster of differentiation molecule 11B (CD11B). The second chain of $\alpha\text{M}\beta\text{2}$ is the common integrin β2 subunit known as CD18, and integrin $\alpha\text{M}\beta\text{2}$ thus belongs to the β2 subfamily (or leukocyte) integrins.[2]

CD11c, also known as Integrin, alpha X (complement component 3 receptor 4 subunit) (ITGAX), is a human gene. This gene encodes the integrin alpha X chain protein. Integrins are heterodimeric integral membrane proteins composed of an alpha chain and a beta chain. This protein combines with the beta 2 chain (ITGB2) to form a leukocyte-specific integrin referred to as inactivated-C3b (iC3b) receptor 4 (CR4). The alpha X beta 2 complex seems to overlap the properties of the alpha M beta 2 integrin in the adherence of neutrophils and monocytes to stimulated endothelium cells, and in the phagocytosis of complement coated particles. CD11c is a type I transmembrane protein found at high levels on most human dendritic cells, but also on monocytes, macrophages, neutrophils, and some B cells that induces cellular activation and helps trigger neutrophil respiratory burst; expressed in hairy cell leukemias, acute nonlymphocytic leukemias, and some B-cell chronic lymphocytic leukemias.

Antigen	Rat CD11a (LFA-1 alpha chain)
Ab Host/type	Mouse monoclonal IgG1, clone W3/25, unlabeled
2-ab	Goat Anti-mouse IgG1-FITC conjugate
-ve control IgG	20102-101, mouse IgG1, purified, isotype matching -ve control

Anti-rat CD11b/c monoclonal antibody recognizes most macrophages including resident peritoneal macrophages, kupffer cells, but only approximately 35% of alveolar macrophages. The antibody also labels dendritic cells extensively, granulocytes and cells with morphology of microglia in the brain. It precipitates three polypeptides of MW 160, 103 and 95 kDa. The antibody inhibits complement mediated rosettes and is probably the rat equivalent of the human receptor for C3b called CR3. Anti-rat CD11b/c monoclonal antibody should prove useful in the recognition of macrophages and microglia.

Form & Storage of Antibodies/Peptide Control

Affinity pure IgG
 100 ug/100ul solution lyophilized powder
 Supplied in **Buffer:** PBS+no preservatives
Reconstitute powder in PBS at 1mg/ml

Cat# RCD011b/c, Anti-Rat IgG (H+L)-FITC-conjugate

Purified antibody was coupled to FITC at F/P ratio ~3:7. The

antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** (1 ml) or **liquid** form (100 tests/ml; see lot sp concn on the vial). Reconstitute powder in PBS in 0.5 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:200-1:2000 for immunofluorescence.

Absorption Wavelength: 495 nm
Emission Wavelength: 528 nm

Recommended Usage

Flow cytometry: 0.5-1 ug/10⁶ cells
 Cell Source Percentage of cells stained above control:
 Thymus 97.0%; Spleen 34.0%; Lymph Node 76.2%

Cat# RCD011b/c-B, Biotin-conjugate

Purified antibody was coupled to Biotin using Biotinamidocaproate N-Hydroxysuccinimide Ester (BAC) at F/P ratio ~10-20:1. The antibody is supplied in PBS, pH 7.4, 0.2% BSA and 0.05% azide in either **lyophilized** or **liquid** form. Reconstitute powder in PBS in 0.5-1 ml to prepare stock solution. Store at -20oC in suitable aliquots. Stability is ~6-12 months. Do not freeze and thaw.

Suggested conjugate dilutions are 1:5,000-1:30,000 ELISA, 1:2K-1:10K for western.

Cat# RCD011b/c -PE, PE-conjugate

The purified antibody was coupled to R-Phycoerythrin (R-PE) (Molecular Weight 240,000 daltons) from seaweed using proprietary methods (A565nm/A280nm ~3-4).

Absorption: 490 nm, 545 nm and 565 nm
Emission Wavelength: 580 nm

The conjugate is provided in PBS, pH 7.5, containing 0.1% bovine serum albumin, (BSA) 0.05% sodium azide and stabilizing agent). DO NOT FREEZE. The product should be stored at 4oC and is stable for a minimum of 1 year. Do not store diluted solutions.

Recommended usage is ~10 ul/106 cells for Flow cytometry or FACS. Due to many experimental variations, optimum concn must be determined for a given applications

General References: Aihara N (1995) J. Neurotrauma 12, 53-63; Robinson AP (1986) Immunol. 57, 239-247; Whiteland JL (1995) J. Histochem. and Cytochem. 43, 313-320

*This product is for in vitro research use only.

RCD011a/b-A 100118A