

# Integrin $\alpha$ M (2LPM19c): sc-20050

## BACKGROUND

Integrin  $\alpha$ M, also designated complement component receptor 3  $\alpha$  chain, CD11b (p170), macrophage antigen  $\alpha$  polypeptide, cell surface glycoprotein Mac-1  $\alpha$  subunit, CR3  $\alpha$  chain, MAC1A, MO1A or ITGAM, 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  $\alpha$  chain and  $\beta$  chain. Integrin  $\alpha$ M combines with Integrin  $\beta$ 2 to form a leukocyte-specific integrin referred to as macrophage receptor 1 (Mac-1) or inactivated-C3b (iC3b) receptor 3 (CR3). Integrin  $\alpha$ M/ $\beta$ 2 is important in the adherence of neutrophils and monocytes to stimulated endothelium, as well as in the phagocytosis of complement coated particles.

## REFERENCES

- Nathan, C., et al. 1990. Tumor necrosis factor and CD11/CD18 ( $\beta$ 2) Integrins act synergistically to lower cAMP in human neutrophils. *J. Cell Biol.* 111: 2171-2181.
- Li, R., et al. 1995. A peptide derived from the intercellular adhesion molecule-2 regulates the avidity of the leukocyte Integrins CD11b/CD18 and CD11c/CD18. *J. Cell Biol.* 129: 1143-1153.
- Nueda, A., et al. 1995. Hematopoietic cell-type-dependent regulation of leukocyte integrin functional activity: CD11b and CD11c expression inhibits LFA-1-dependent aggregation of differentiated U937 cells. *Cell. Immunol.* 164: 163-169.
- Walzog, B., et al. 1995. The leukocyte Integrin Mac-1 (CD11b/CD18) contributes to binding of human granulocytes to collagen. *Exp. Cell Res.* 218: 28-38.
- Schlecht, G., et al. 2004. Antigen targeting to CD11b allows efficient presentation of CD4<sup>+</sup> and CD8<sup>+</sup> T cell epitopes and *in vivo* Th1-polarized T cell priming. *J. Immunol.* 173: 6089-6097.
- Lau, D., et al. 2005. Myeloperoxidase mediates neutrophil activation by association with CD11b/CD18 integrins. *Proc. Natl. Acad. Sci. USA* 102: 431-436.
- Sandilands, G.P., et al. 2005. Cross-linking of neutrophil CD11b results in rapid cell surface expression of molecules required for antigen presentation and T-cell activation. *Immunology* 114: 354-368.
- Hieronimus, T., et al. 2005. Progressive and controlled development of mouse dendritic cells from Flt3<sup>+</sup>CD11b<sup>+</sup> progenitors *in vitro*. *J. Immunol.* 174: 2552-2562.

## CHROMOSOMAL LOCATION

Genetic locus: ITGAM (human) mapping to 16p11.2; Itgam (mouse) mapping to 7 F3.

## SOURCE

Integrin  $\alpha$ M (2LPM19c) is a mouse monoclonal antibody raised against purified iC3b receptor.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as phycoerythrin (sc-20050 PE) or fluorescein (sc-20050 FITC) conjugates for flow cytometry, 100 tests.

## APPLICATIONS

Integrin  $\alpha$ M (2LPM19c) is recommended for detection of Integrin  $\alpha$ M of mouse and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per  $1 \times 10^6$  cells).

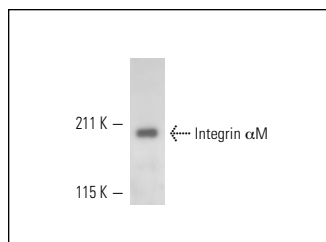
Suitable for use as control antibody for Integrin  $\alpha$ M siRNA (h): sc-37261, Integrin  $\alpha$ M siRNA (m): sc-35693, Integrin  $\alpha$ M shRNA Plasmid (h): sc-37261-SH, Integrin  $\alpha$ M shRNA Plasmid (m): sc-35693-SH, Integrin  $\alpha$ M shRNA (h) Lentiviral Particles: sc-37261-V and Integrin  $\alpha$ M shRNA (m) Lentiviral Particles: sc-35693-V.

Molecular Weight of Integrin  $\alpha$ M: 170 kDa.

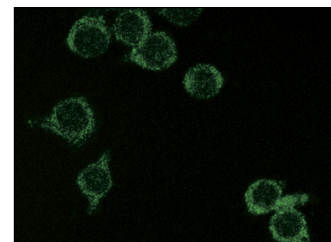
## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-mouse IgG-FITC: sc-2010 (dilution range: 1:100-1:400) or goat anti-mouse IgG-TR: sc-2781 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## DATA



Western blot analysis of Integrin  $\alpha$ M expression in human PBL whole cell lysate immunoprecipitated with Integrin  $\alpha$ M (2LPM19c): sc-20050 and detected with Integrin  $\alpha$ M (H-61): sc-28664.



Integrin  $\alpha$ M (2LPM19c): sc-20050. Immunofluorescence staining of methanol-fixed RAW 264.7 cells showing membrane staining.

## SELECT PRODUCT CITATIONS

- Liu, J., et al. 2006. Paeoniflorin attenuates chronic cerebral hypoperfusion-induced learning dysfunction and brain damage in rats. *Brain Res.* 1089: 162-170.
- Yoon, J., et al. 2007. CD66b regulates adhesion and activation of human eosinophils. *J. Immunol.* 179: 8454-8462.

## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.