

# Integrin $\alpha$ M (VIM12): sc-59744

## BACKGROUND

Integrin  $\alpha$ M (also designated complement component receptor-3  $\alpha$ , CD11b (p170), macrophage antigen a polypeptide, cell surface glycoprotein Mac-1 a subunit, MAC1A, MO1A and 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 the 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, and also in the phagocytosis of complement coated particles.

## REFERENCES

- Nathan, C., et al. 1990. Tumor necrosis factor and CD11/CD18 ( $\beta$ 2) Integrins wact 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.
- Slecht, 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.

## CHROMOSOMAL LOCATION

Genetic locus: ITGAM (human) mapping to 16p11.2.

## SOURCE

Integrin  $\alpha$ M (VIM12) is a mouse monoclonal antibody raised against the heavily glycosylated portion of the C-terminal region of Integrin  $\alpha$ M of human origin.

## PRODUCT

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

## STORAGE

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

## APPLICATIONS

Integrin  $\alpha$ M (VIM12) is recommended for detection of Integrin  $\alpha$ M heterodimer present on natural killer cells, monocytes and granulocytes of human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

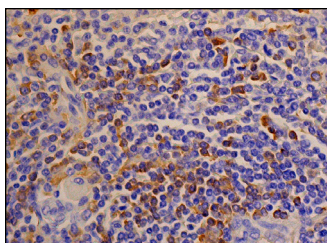
Suitable for use as control antibody for Integrin  $\alpha$ M siRNA (h): sc-37261, Integrin  $\alpha$ M shRNA Plasmid (h): sc-37261-SH and Integrin  $\alpha$ M shRNA (h) Lentiviral Particles: sc-37261-V.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 2) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA




Integrin  $\alpha$ M (VIM12): sc-59744. Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing cytoplasmic staining of cells in white pulp and cells in red pulp.

## SELECT PRODUCT CITATIONS

- Bzowska, M., et al. 2012. Oxidized LDLs inhibit TLR-induced IL-10 production by monocytes: a new aspect of pathogen-accelerated atherosclerosis. *Inflammation* 35: 1567-1584.
- Day, C.J., et al. 2022. Complement receptor 3 mediates HIV-1 transcytosis across an intact cervical epithelial cell barrier: new insight into HIV transmission in women. *mBio*. E-published.

## RESEARCH USE

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



See **Integrin  $\alpha$ M (2LPM19c): sc-20050** for Integrin  $\alpha$ M antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.