

# Integrin $\alpha$ M (2Q913): sc-71447

## 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 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 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 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 U-937 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.

## CHROMOSOMAL LOCATION

Genetic locus: Itgam (mouse) mapping to 7 F3.

## SOURCE

Integrin  $\alpha$ M (2Q913) is a mouse monoclonal antibody raised against peritoneal macrophages of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\alpha$ M (2Q913) is available conjugated to either phycoerythrin (sc-71447 PE) or fluorescein (sc-71447 FITC), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM.

## RESEARCH USE

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

## APPLICATIONS

Integrin  $\alpha$ M (2Q913) is recommended for detection of Integrin  $\alpha$ M of mouse and rat origin by immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], 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 (m): sc-35693, Integrin  $\alpha$ M shRNA Plasmid (m): sc-35693-SH and Integrin  $\alpha$ M shRNA (m) Lentiviral Particles: sc-35693-V.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) 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<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850. 3) Immunohistochemistry: use m-IgG $\kappa$  BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## SELECT PRODUCT CITATIONS

- Razafimanjato, H., et al. 2011. The ribotoxin deoxynivalenol affects the viability and functions of glial cells. *Glia* 59: 1672-1683.

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.



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