SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αM (3A33): sc-52600

The Power to Question

BACKGROUND

Integrin αM (also designated complement component receptor 3 α chain, CD11b (p170), macrophage antigen α polypeptide, cell surface glycoprotein Mac-1 α subunit, CR3 α chain, MAC1A, MO1A, 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 α chain and β chain. Integrin αM combines with Integrin β2 to form a leukocyte-specific integrin referred to as macrophage receptor 1 (Mac-1) or inactivated-C3b (iC3b) receptor 3 (CR3). Integrin αM/β2 is important in the adherence of neutrophils and monocytes to stimulated endothelium, and also in the phagocytosis of complement coated particles.

REFERENCES

1. Nathan, C., et al. 1990. Tumor necrosis factor and CD11/CD18 (β2) integrins act synergistically to lower cAMP in human neutrophils. J. Cell Biol. 111: 2171-2181.
2. David, V., et al. 1991. Proliferation of resting lymphocytes is induced by triggering T cells through an epitope common to the three CD18/CD11 leukocyte adhesion molecules. Cell. Immunol. 136: 519-524.
3. Majima, T., et al. 1993. Defective mononuclear cell antibody-dependent cellular cytotoxicity (ADCC) in patients with leukocyte adhesion deficiency emphasizing on different CD11/CD18 requirement of Fc γ RI versus Fc gamma RII in ADCC. Cell. Immunol. 148: 385-396.
4. 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.
5. Mazzone, A., et al. 1995. Leukocyte CD11/CD18 integrins; biological and clinical relevance. Haematologica 80: 161-175.
6. 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 differentiatied U937 cells. Cell. Immunol. 164: 163-169.
7. 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.

CHROMOSOMAL LOCATION

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

SOURCE

Integrin αM (3A33) is a rat monoclonal antibody raised against Integrin αM of mouse origin.

PRODUCT

Each vial contains 100 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin αM (3A33) is available conjugated fluorescein (sc-52600 FITC, 200 µg/ml), for IF, IHC(P) and FCM.

APPLICATIONS

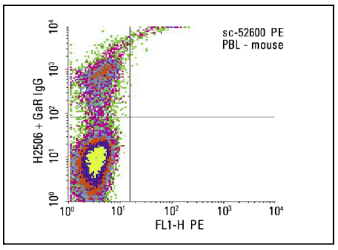
Integrin αM (3A33) is recommended for detection of Integrin αM of mouse origin by immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin αM siRNA (m): sc-35693, Integrin αM shRNA Plasmid (m): sc-35693-SH and Integrin αM shRNA (m) Lentiviral Particles: sc-35693-V.

Molecular Weight of Integrin αM: 170 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211.

DATA



Integrin αM (3A33): sc-52600. Indirect FCM analysis of mouse peripheral blood leukocytes stained with Integrin αM (3A33), followed by PE-conjugated goat anti-rat IgG: sc-3740. Quadrant markers were set based on the isotype control, normal rat IgG_{2a}: sc-3883.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

See **Integrin αM (2LPM19c): sc-20050** for Integrin αM antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.