SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αM (M-19): sc-6614

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. 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.
3. 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.
4. 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.
5. Schlecht, G., et al. 2004. Antigen targeting to CD11b allows efficient presentation of $CD4^+$ and $CD8^+$ T cell epitopes and *in vivo* Th1-polarized T cell priming. J. Immunol. 173: 6089-6097.

CHROMOSOMAL LOCATION

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

SOURCE

Integrin αM (M-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Integrin αM of mouse origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6614 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

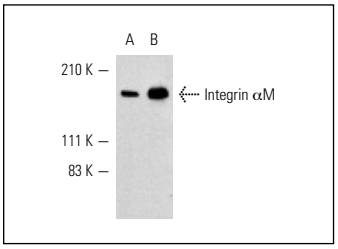
Integrin αM (M-19) is recommended for detection of Integrin αM of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 or LPS-treated RAW 264.7 whole cell lysate.

DATA



Integrin αM (M-19): sc-6614. Western blot analysis of Integrin αM (CD11β) expression in whole cell lysates prepared from untreated (**A**) and phorbol ester and LPS-treated (**B**) RAW 264.7 cultures.

SELECT PRODUCT CITATIONS

1. Xu, H., et al. 2001. Attenuation of hypoxia-ischemia-induced monocyte chemoattractant protein-1 expression in brain of neonatal mice deficient in interleukin-1 converting enzyme. Brain Res. Mol. Brain Res. 90: 57-67.
2. Hahn, P.Y., et al. 2003. *Pneumocystis carinii* cell wall β-glucan induces release of macrophage inflammatory protein-2 from alveolar epithelial cells via a lactosylceramide-mediated mechanism. J. Biol. Chem. 278: 2043-2050.
3. Mócsai, A., et al. 2004. The immunomodulatory adapter proteins DAP12 and Fc receptor γ-chain (FcRg) regulate development of functional osteoclasts through the Syk tyrosine kinase. Proc. Natl. Acad. Sci. USA 101: 6158-6163.
4. Wang, J.G., et al. 2006. Retinoic acid induces leukemia cell G_1 arrest and transition into differentiation by inhibiting cyclin-dependent kinase-activating kinase binding and phosphorylation of PML/RARα. FASEB J. 20: 2142-2144.
5. Makarenkova, V.P., et al. 2006. $CD11b^+/Gr\text{-}1^+$ myeloid suppressor cells cause T cell dysfunction after traumatic stress. J. Immunol. 176: 2085-2094.
6. Oliveira, L.A., et al. 2010. Expression of β 2 integrin (CD18) in embryonic mouse and chicken heart. Braz. J. Med. Biol. Res. 43: 25-35.