

Integrin α 4 (MFR4.B): sc-19667

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16α and 8β subunits heterodimerize to produce more than 20 different receptors. Most Integrin receptors bind ligands that are components of the extracellular matrix, including fibronectin, collagen and vitronectin. Certain Integrins can also bind to soluble ligands such as fibrinogen, or to counterreceptors on adjacent cells such as the intracellular adhesion molecules (ICAMs), leading to aggregation of cells. Ligands serve to cross-link or cluster integrins by binding to adjacent Integrin receptors; both receptor clustering and ligand occupancy are necessary for the activation of integrin-mediated responses. In addition to mediating cell adhesion and cytoskeletal organization, Integrins function as signaling receptors. Signals transduced by Integrins play a role in many biological processes, including cell growth, differentiation, migration and apoptosis.

REFERENCES

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3. Teixido, J., et al. 1992. Functional and structural analysis of VLA-4 Integrin α 4 subunit cleavage. *J. Biol. Chem.* 267, 1786-1791.
4. Lauri, D., et al. 1993. Decreased adhesion to endothelial cells and matrix proteins of H-2Kb gene transfected tumour cells. *Br. J. Cancer* 68: 862-867.
5. Christensen, J.P., et al. 1995. Integrin α 4 directs virus-activated CD8⁺ T cells to sites of infection. *J. Immunol.* 154: 5293-5301.
6. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in Integrin transmembrane function. *Science* 267: 883-885.
7. Henseleit, U., et al. 1995. Expression of murine VCAM-1 *in vitro* and in different models of inflammation *in vivo*: correlation with immigration of monocytes. *Exp. Dermatol.* 4: 249-256.
8. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
9. Zhang, Y., et al. 2004. Functional differences between integrin α 4 and integrins α 5/ α V in modulating the motility of human oral squamous carcinoma cells in response to the V region and heparin-binding domain of Fibronectin. *Exp. Cell Res.* 295: 48-58.

CHROMOSOMAL LOCATION

Genetic locus: Itga4 (mouse) mapping to 2 C3.

SOURCE

Integrin α 4 (MFR4.B) is a rat monoclonal antibody raised against mouse fetal liver mast cell line MC/91 expressing Integrin α 4 (also designated CD49d).

PRODUCT

Each vial contains 200 μ g IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Integrin α 4 (MFR4.B) is recommended for detection of Integrin α 4 of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

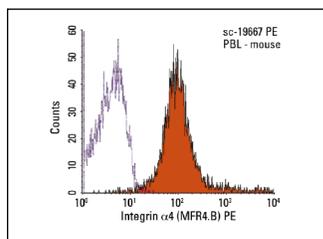
Suitable for use as control antibody for Integrin α 4 siRNA (m): sc-35686, Integrin α 4 shRNA Plasmid (m): sc-35686-SH and Integrin α 4 shRNA (m) Lentiviral Particles: sc-35686-V.

Molecular Weight of Integrin α 4: 150 kDa.

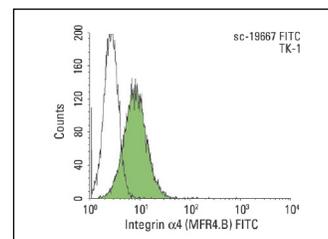
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunofluorescence: use goat anti-rat IgG-FITC: sc-2011 (dilution range: 1:100-1:400) or goat anti-rat IgG-TR: sc-2782 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Integrin α 4 (MFR4.B) PE: sc-19667 PE. FCM analysis of mouse peripheral blood leukocytes. Black line histogram represents the isotype control, normal rat IgG_{2a}: sc-2872.



Integrin α 4 (MFR4.B) FITC: sc-19667 FITC. FCM analysis of TK-1 cells. Black line histogram represents the isotype control, normal rat IgG_{2a} FITC: sc-2831.

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 or our catalog for detailed protocols and support products.