

Integrin α 4 (R1-2): sc-19625

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. Miyake, K., et al. 1991. Evidence for a role of the integrin VLA-4 in lympho-hemopoiesis. *J. Exp. Med.* 173: 599-607.
4. Teixido, J., et al. 1992. Functional and structural analysis of VLA-4 Integrin α 4 subunit cleavage. *J. Biol. Chem.* 267, 1786-1791.
5. 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.
6. 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.
7. Christensen, J.P., et al. 1995. Integrin α 4 directs virus-activated CD8⁺ T cells to sites of infection. *J. Immunol.* 154: 5293-5301.
8. Juliano, R. 1997. 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 (R1-2) is a rat monoclonal antibody raised against AKR/Cum mouse spontaneous T lymphoma line TK1.

PRODUCT

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

APPLICATIONS

Integrin α 4 (R1-2) is recommended for detection of Integrin α 4 of mouse origin by immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1 x 10⁶ cells).

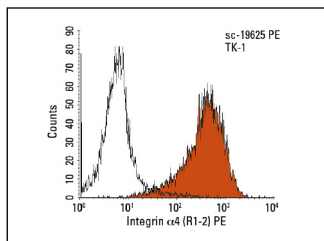
Suitable for use as control antibody for Integrin α 4 siRNA (m): sc-35686, Integrin α 4 shRNA Plasmid (m): sc-35686-SH and Integrin α 4 shRNA (m) Lentiviral Particles: sc-35686-V.

Molecular Weight of Integrin α 4: 150 kDa.

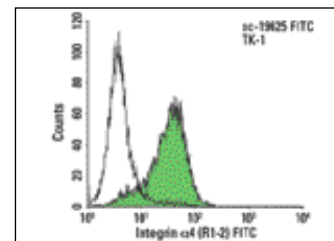
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/ 2.0 ml). 2) 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 (R1-2) PE: sc-19625 PE. FCM analysis of TK-1 cells. Black line histogram represents the isotype control, normal rat IgG_{2b}: sc-2873.



Integrin α 4 (R1-2) FITC: sc-19625 FITC. FCM analysis of TK-1 cells. Black line histogram represents the isotype control, normal rat IgG_{2b}: sc-2835.

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.