

Integrin $\alpha 2$ (2): sc-136257

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and 8 β 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 counter-receptors 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. Integrin $\alpha 2$ is responsible for adhesion of platelets and other cells to collagens. Modulation of collagen and collagenase gene expression force generation and organization of newly synthesized extracellular matrix.

REFERENCES

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3. Santoso, S., et al. 1993. The human platelet alloantigens Bra and Brb are associated with a single amino acid polymorphism on glycoprotein Ia (Integrin subunit $\alpha 2$). *J. Clin. Invest.* 92: 2427-2432.
4. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
5. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
6. Moore, T.A., et al. 1996. Inhibition of $\gamma \delta$ T cell development and early thymocyte maturation in IL-7^{-/-} mice. *J. Immunol.* 157: 2366-2373.
7. Juliano, R. 1997. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
8. Kroll, H., et al. 2000. The impact of the glycoprotein Ia collagen receptor subunit A1648G gene polymorphism on coronary artery disease and acute myocardial infarction. *Thromb. Haemost.* 83: 392-396.
9. Arase, H., et al. 2001. Cutting edge: the mouse NK cell-associated antigen recognized by DX5 monoclonal antibody is CD49b ($\alpha 2$ Integrin, very late antigen-2). *J. Immunol.* 167: 1141-1144.

CHROMOSOMAL LOCATION

Genetic locus: ITGA2 (human) mapping to 5q11.2.

SOURCE

Integrin $\alpha 2$ (2) is a mouse monoclonal antibody raised against amino acids 42-245 of Integrin $\alpha 2$ of human origin.

PRODUCT

Each vial contains 50 μ g IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

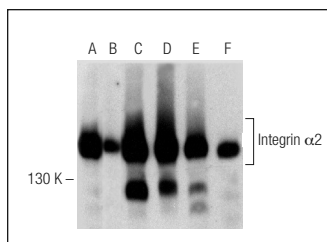
Integrin $\alpha 2$ (2) is recommended for detection of Integrin $\alpha 2$ of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin $\alpha 2$ siRNA (h): sc-29371, Integrin $\alpha 2$ shRNA Plasmid (h): sc-29371-SH and Integrin $\alpha 2$ shRNA (h) Lentiviral Particles: sc-29371-V.

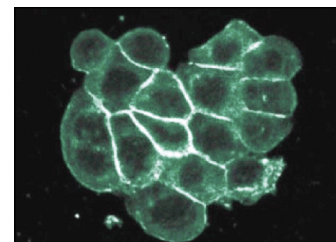
Molecular Weight of Integrin $\alpha 2$: 150 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, WiDR cell lysate: sc-24779 or HCT 116 whole cell lysate.

DATA



Integrin $\alpha 2$ (2): sc-136257. Western blot analysis of Integrin $\alpha 2$ expression in human platelet extract (A), human PBL (B), HCT 116 (C), WiDR (D), HeLa (E) and HEK293 (F) whole cell lysates.



Integrin $\alpha 2$ (2): sc-136257. Immunofluorescence staining of WiDR cells showing membrane localization.

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. Not for resale.

PROTOCOLS

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