

Integrin α 1 (R-164): sc-10728

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 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.

CHROMOSOMAL LOCATION

Genetic locus: ITGA1 (human) mapping to 5q11.2; Itga1 (mouse) mapping to 13 D2.2.

SOURCE

Integrin α 1 (R-164) is a rabbit polyclonal antibody raised against amino acids 980-1143 mapping at the C-terminus of Integrin α 1 (also designated CD49 α) of rat origin.

PRODUCT

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

APPLICATIONS

Integrin α 1 (R-164) is recommended for detection of Integrin α 1 of mouse, rat and 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)], 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 α 1 siRNA (h): sc-43125, Integrin α 1 siRNA (m): sc-43126, Integrin α 1 shRNA Plasmid (h): sc-43125-SH, Integrin α 1 shRNA Plasmid (m): sc-43126-SH, Integrin α 1 shRNA (h) Lentiviral Particles: sc-43125-V and Integrin α 1 shRNA (m) Lentiviral Particles: sc-43126-V.

Molecular Weight of Integrin α 1: 200 kDa.

Positive Controls: PC-12 cell lysate: sc-2250 or SK-N-SH cell lysate: sc-2410.

STORAGE

Store at 4 $^{\circ}$ C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

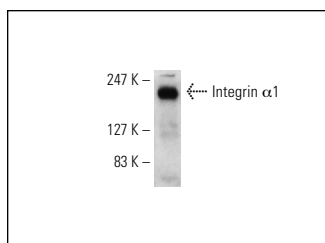
PROTOCOLS

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

RESEARCH USE

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

DATA



Integrin α 1 (R-164): sc-10728. Western blot analysis of Integrin α 1 expression in PC-12 whole cell lysate.

SELECT PRODUCT CITATIONS

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3. Yamamoto, H., et al. 2008. Induction of cell adhesion by galectin-8 and its target molecules in Jurkat T-cells. *J. Biochem.* 143: 311-324.
4. Martin, S., et al. 2009. Caveolin-1 regulates glioblastoma aggressiveness through the control of α 5 β 1 integrin expression and modulates glioblastoma responsiveness to SJ749, an α 5 β 1 integrin antagonist. *Biochim. Biophys. Acta* 1793: 354-367.
5. Sondag, C.M., et al. 2010. Adhesion of monocytes to type I collagen stimulates an APP-dependent proinflammatory signaling response and release of A β 1-40. *J. Neuroinflammation* 7: 22.
6. Ji, H., et al. 2010. Progesterone modulates integrin α 2 (ITGA2) and α 11 (ITGA11) in the pregnant cervix. *Reprod. Sci.* 18: 156-163.
7. Lindberg, K., et al. 2010. Expression of estrogen receptor β increases integrin α 1 and integrin β 1 levels and enhances adhesion of breast cancer cells. *J. Cell. Physiol.* 222: 156-167.
8. Logotheti, S., et al. 2012. Progression of mouse skin carcinogenesis is associated with increased ER α levels and is repressed by a dominant negative form of ER α . *PLoS ONE* 7: e41957.
9. Ozeki, N., et al. 2014. Differentiation of human skeletal muscle stem cells into odontoblasts is dependent on induction of α 1 integrin expression. *J. Biol. Chem.* 289: 14380-14391.

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Try **Integrin α 1 (A-9): sc-271034** or **Integrin α 1 (TS2/7.1.1): sc-81733**, our highly recommended monoclonal alternatives to Integrin α 1 (R-164).