

Integrin $\alpha 9/\beta 1$ (2Q954): sc-71428

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.

REFERENCES

1. Tsuji, T., et al. 1991. Identification of human galactoprotein $\beta 3$, an oncogenic transformation-induced membrane glycoprotein, as VLA-3 α subunit: the primary structure of human Integrin $\alpha 3$. *J. Biochem.* 109: 659-665.
2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
3. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
4. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
5. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
6. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.

CHROMOSOMAL LOCATION

Genetic locus: ITGA9 (human) mapping to 3p22.2, ITGB1 (human) mapping to 10p11.22.

SOURCE

Integrin $\alpha 9/\beta 1$ (2Q954) is a mouse monoclonal antibody raised against Integrin $\alpha 9/\beta 1$ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\alpha 9/\beta 1$ (2Q954) is available conjugated to either phycoerythrin (sc-71428 PE) or fluorescein (sc-71428 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

Integrin $\alpha 9/\beta 1$ (2Q954) is recommended for detection of Integrin $\alpha 9$ and Integrin $\beta 1$ 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)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 μ g per 1×10^6 cells).

Molecular Weight of Integrin $\alpha 9$: 150 kDa.

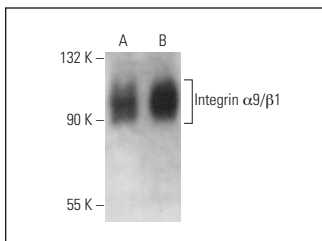
Molecular Weight of Integrin $\beta 1$: 130 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or A2058 whole cell lysate: sc-364178.

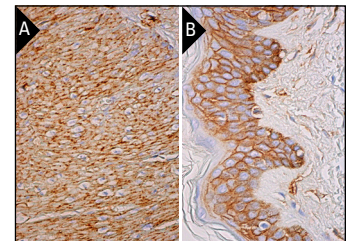
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgG κ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Integrin $\alpha 9/\beta 1$ (2Q954): sc-71428. Western blot analysis of Integrin $\alpha 9/\beta 1$ expression in HeLa (A) and A2058 (B) whole cell lysates.



Integrin $\alpha 9/\beta 1$ (2Q954): sc-71428. Immunoperoxidase staining of formalin fixed, paraffin-embedded human smooth muscle tissue showing membrane and cytoplasmic staining of smooth muscle cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing membrane and cytoplasmic staining of keratinocytes and cytoplasmic staining of fibroblasts and melanocytes (B).

RESEARCH USE

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



See **Integrin $\beta 1$ (A-4): sc-374429** for Integrin $\beta 1$ antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.