

Integrin $\alpha 7$ (H-40): sc-50431

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

- Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
- Miyamoto, S., Akiyama, S.K. and Yamada, K.M. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
- Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
- Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
- 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: ITGA7 (human) mapping to 12q13.2; Itga7 (mouse) mapping to 10 D3.

SOURCE

Integrin $\alpha 7$ (H-40) is a rabbit polyclonal antibody raised against amino acids 878-917 mapping within an extracellular domain of Integrin $\alpha 7$ of human origin.

PRODUCT

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

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.

APPLICATIONS

Integrin $\alpha 7$ (H-40) is recommended for detection of precursor and mature heavy chain Integrin $\alpha 7$ 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).

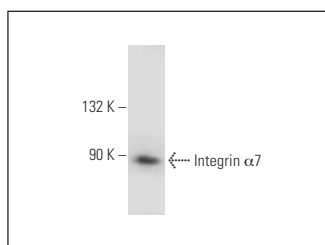
Integrin $\alpha 7$ (H-40) is also recommended for detection of precursor and mature heavy chain Integrin $\alpha 7$ in additional species, including equine, canine and bovine.

Suitable for use as control antibody for Integrin $\alpha 7$ siRNA (h): sc-60018, Integrin $\alpha 7$ siRNA (m): sc-43131, Integrin $\alpha 7$ shRNA Plasmid (h): sc-60018-SH, Integrin $\alpha 7$ shRNA Plasmid (m): sc-43131-SH, Integrin $\alpha 7$ shRNA (h) Lentiviral Particles: sc-60018-V and Integrin $\alpha 7$ shRNA (m) Lentiviral Particles: sc-43131-V.

Molecular Weight of Integrin $\alpha 7$: 97 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204 or ACHN whole cell lysate: sc-364365.

DATA



Integrin $\alpha 7$ (H-40): sc-50431. Western blot analysis of Integrin $\alpha 7$ expression in ACHN whole cell lysate.

SELECT PRODUCT CITATIONS

- Dalton, G.D., et al. 2013. CB₁ cannabinoid receptors promote maximal FAK catalytic activity by stimulating cooperative signaling between receptor tyrosine kinases and integrins in neuronal cells. *Cell. Signal.* 25: 1665-1677.
- Forterre, A., et al. 2014. Myotube-derived exosomal miRNAs downregulate Sirtuin1 in myoblasts during muscle cell differentiation. *Cell Cycle* 13: 78-89.

PROTOCOLS

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



Try **Integrin $\alpha 7$ (012-Z): sc-81807**, our highly recommended monoclonal alternative to Integrin $\alpha 7$ (H-40).