

Integrin $\alpha 7$ (012-Z): sc-81807

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. Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
2. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
3. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
4. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.

CHROMOSOMAL LOCATION

Genetic locus: ITGA7 (human) mapping to 12q13.2; Itga7 (mouse) mapping to 10 D3.

SOURCE

Integrin $\alpha 7$ (012-Z) is a mouse monoclonal antibody raised against recombinant Integrin $\alpha 7$ of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

Integrin $\alpha 7$ (012-Z) is recommended for detection of 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

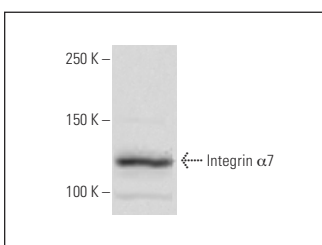
Molecular Weight of Integrin $\alpha 7$: 97 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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).

DATA



Integrin $\alpha 7$ (012-Z): sc-81807. Western blot analysis of Integrin $\alpha 7$ expression in Jurkat whole cell lysate.

SELECT PRODUCT CITATIONS

1. Call, J.A., et al. 2010. Progressive resistance voluntary wheel running in the mdx mouse. *Muscle Nerve* 42: 871-880.
2. de Rezende, F.F., et al. 2012. Integrin $\alpha 7\beta 1$ is a redox-regulated target of hydrogen peroxide in vascular smooth muscle cell adhesion. *Free Radic. Biol. Med.* 53: 521-531.
3. Kameyama, T., et al. 2018. Efficacy of prednisolone in generated myotubes derived from fibroblasts of duchenne muscular dystrophy patients. *Front. Pharmacol.* 9: 1402.
4. Kang, N., et al. 2019. The effects of microenergy acoustic pulses on animal model of obesity-associated stress urinary incontinence. Part 2: *in situ* activation of pelvic floor and urethral striated muscle progenitor cells. *Neurourol. Urodyn.* 38: 2140-2150.
5. Liang, M., et al. 2023. Effect of Integrin $\alpha 7$ on cell proliferation, invasion, apoptosis and the PI3K/AKT pathway, and its association with clinico-pathological features in endometrial cancer. *Oncol. Lett.* 25: 26.

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 for detailed protocols and support products.