

Integrin $\beta 4$ (7): sc-135950

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. Integrin $\beta 4$ (ITGB4), also known as CD104, is a 1,822 amino acid single-pass type I membrane protein belonging to the Integrin β chain family. Known to associate with Integrin $\alpha 6$, Integrin $\beta 4$ functions as a receptor for Laminin and is predominantly expressed by epithelia. Integrin $\beta 4$ exists as five alternatively spliced isoforms that are encoded by a gene located on human chromosome 17q25.1.

REFERENCES

- Hynes, R.O. 1992. Integrins: versatility, modulation, and signaling in cell adhesion. *Cell* 69: 11-25.
- Miyamoto, S., et al. 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.
- Naessens, J., et al. 1997. Nomenclature and characterization of leukocyte differentiation antigens in ruminants. *Immunol. Today* 18: 365-638.
- Drbal, K., et al. 2000. Human leukocytes contain a large pool of free forms of CD18. *Biochem. Biophys. Res. Commun.* 275: 295-299.
- Drbal, K., et al. 2001. A proteolytically truncated form of free CD18, the common chain of leukocyte integrins, as a novel marker of activated myeloid cells. *Blood* 98: 1561-1566.
- Dusinsky, R., et al. 2001. Monoclonal antibodies specific for bovine CD18. *Folia Biol.* 47: 108-110.

CHROMOSOMAL LOCATION

Genetic locus: ITGB4 (human) mapping to 17q25.1; Itgb4 (mouse) mapping to 11 E2.

SOURCE

Integrin $\beta 4$ (7) is a mouse monoclonal antibody raised against amino acids 1612-1821 of Integrin $\beta 4$ of human origin.

PRODUCT

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

APPLICATIONS

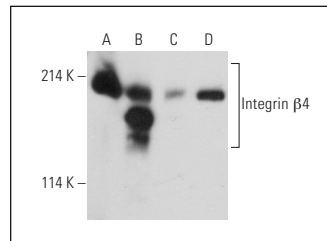
Integrin $\beta 4$ (7) recommended for detection of Integrin $\beta 4$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin $\beta 4$ siRNA (h): sc-35678, Integrin $\beta 4$ siRNA (m): sc-35679, Integrin $\beta 4$ shRNA Plasmid (h): sc-35678-SH, Integrin $\beta 4$ shRNA Plasmid (m): sc-35679-SH, Integrin $\beta 4$ shRNA (h) Lentiviral Particles: sc-35678-V and Integrin $\beta 4$ shRNA (m) Lentiviral Particles: sc-35679-V.

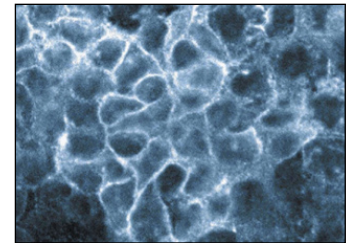
Molecular Weight of Integrin $\beta 4$: 205 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201, MCF7 whole cell lysate: sc-2206 or SW480 cell lysate: sc-2219.

DATA



Integrin $\beta 4$ (7): sc-135950. Western blot analysis of Integrin $\beta 4$ expression in A-431 (A), SW480 (B), A549 (C) and MCF7 (D) whole cell lysates.



Integrin $\beta 4$ (7): sc-135950. Immunofluorescence staining of A-431 cells showing membrane staining.

SELECT PRODUCT CITATIONS

- Ranieri, D., et al. 2016. Expression of the FGFR2 mesenchymal splicing variant in epithelial cells drives epithelial-mesenchymal transition. *Oncotarget* 7: 5440-5460.

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.