Integrin β1 (h): 293 Lysate: sc-113298



The Power to Question

BACKGROUND

Integrins are heterodimers composed of non-covalently 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.
- Balzac, F., Belkin, A.M., Koteliansky, V.E., Balabanov, Y.V., Altruda, F., Silengo, L. and Tarone, G. 1993. Expression and functional analysis of a cytoplasmic domain variant of the β1 Integrin subunit. J. Cell Biol. 121: 171-178.
- Balzac, F., Retta, S.F., Albini, A., Melchiorri, A., Koteliansky, V.E., Geuna, M., Silengo, L. and Tarone, G. 1994. Expression of β1B Integrin isoform in CHO cells results in a dominant negative effect on cell adhesion and motility. J. Cell Biol. 127: 557-565.
- Zhidkova, N.I., Belkin, A.M. and Mayne, R. 1995. Novel isoform of β1 Integrin expressed in skeletal and cardiac muscle. Biochem. Biophys. Res. Commun. 214: 279-285.
- 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.
- 7. 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.
- Kishimoto, T., Kikutani, H., von dem Borne, A.E., et al, eds. 1998. Leukocyte Typing VI. New York: Garland Publishing, Inc.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

PROTOCOLS

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

CHROMOSOMAL LOCATION

Genetic locus: ITGB1 (human) mapping to 10p11.22.

PRODUCT

Integrin $\beta1$ (h): 293 Lysate represents a lysate of human Integrin $\beta1$ transfected 293 cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Integrin $\beta 1$ (h): 293 Lysate is suitable as a Western Blotting positive control for human reactive Integrin $\beta 1$ antibodies. Recommended use: 10-20 μ l per lane.

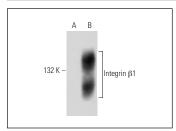
Control 293 Lysate: sc-110760 is available as a Western Blotting negative control lysate derived from non-tranfected 293 cells.

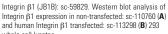
Integrin $\beta1$ (JB1B): sc-59829 is recommended as a positive control antibody for Western Blot analysis of enhanced human Integrin $\beta1$ expression in Integrin $\beta1$ transfected 293 cells (starting dilution 1:100, dilution range 1:100-1:1,000).

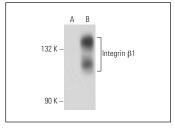
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lgG κ BP-HRP: sc-516102 or m-lgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz MarkerTM Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA







Integrin β 1 (3H1192): sc-71392. Western blot analysis of Integrin β 1 expression in non-transfected: sc-110760 ($\bf A$) and human Integrin β 1 transfected: sc-113298 ($\bf B$) 293 whole cell lysates.

RESEARCH USE

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

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