

Integrin $\beta 5$ (B-1): sc-393866

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., 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.
- Burns, K.H., et al. 2002. Characterization of integrin expression in the mouse ovary. *Biol. Reprod.* 67: 743-751.

CHROMOSOMAL LOCATION

Genetic locus: ITGB5 (human) mapping to 3q21.2; Itgb5 (mouse) mapping to 16 B3.

SOURCE

Integrin $\beta 5$ (B-1) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 70-99 within an internal region of Integrin $\beta 5$ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-393866 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

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

APPLICATIONS

Integrin $\beta 5$ (B-1) is recommended for detection of Integrin $\beta 5$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for Integrin $\beta 5$ siRNA (h): sc-35680, Integrin $\beta 5$ siRNA (m): sc-35681, Integrin $\beta 5$ siRNA (r): sc-270465, Integrin $\beta 5$ shRNA Plasmid (h): sc-35680-SH, Integrin $\beta 5$ shRNA Plasmid (m): sc-35681-SH, Integrin $\beta 5$ shRNA Plasmid (r): sc-270465-SH, Integrin $\beta 5$ shRNA (h) Lentiviral Particles: sc-35680-V, Integrin $\beta 5$ shRNA (m) Lentiviral Particles: sc-35681-V and Integrin $\beta 5$ shRNA (r) Lentiviral Particles: sc-270465-V.

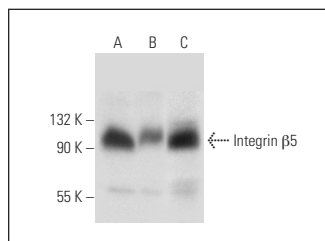
Molecular Weight of Integrin $\beta 5$: 100 kDa.

Positive Controls: COLO 320DM cell lysate: sc-2226, HeLa whole cell lysate: sc-2200 or SW480 cell lysate: sc-2219.

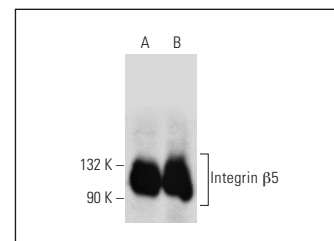
RECOMMENDED SUPPORT REAGENTS

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 L-Agarose: sc-2336 (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.

DATA



Integrin $\beta 5$ (B-1): sc-393866. Western blot analysis of Integrin $\beta 5$ expression in HeLa (A) and COLO 320DM (B) whole cell lysates and human colon tissue extract (C).



Integrin $\beta 5$ (B-1): sc-393866. Western blot analysis of Integrin $\beta 5$ expression in HeLa (A) and SW480 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Armacki, M., et al. 2020. Protein kinase D1, reduced in human pancreatic tumors, increases secretion of small extracellular vesicles from cancer cells that promote metastasis to lung in mice. *Gastroenterology* 159: 1019-1035.e22.

RESEARCH USE

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