

Integrin $\beta 7$ (D-5): sc-515397

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.

CHROMOSOMAL LOCATION

Genetic locus: ITGB7 (human) mapping to 12q13.13.

SOURCE

Integrin $\beta 7$ (D-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 775-798 at the C-terminus of Integrin $\beta 7$ of human origin.

PRODUCT

Each vial contains 200 μg IgG_{2a} lambda light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\beta 7$ (D-5) is available conjugated to agarose (sc-515397 AC), 500 μg /0.25 ml agarose in 1 ml, for IP; to HRP (sc-515397 HRP), 200 $\mu\text{g}/\text{ml}$, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515397 PE), fluorescein (sc-515397 FITC), Alexa Fluor[®] 488 (sc-515397 AF488), Alexa Fluor[®] 546 (sc-515397 AF546), Alexa Fluor[®] 594 (sc-515397 AF594) or Alexa Fluor[®] 647 (sc-515397 AF647), 200 $\mu\text{g}/\text{ml}$, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515397 AF680) or Alexa Fluor[®] 790 (sc-515397 AF790), 200 $\mu\text{g}/\text{ml}$, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-515397 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Integrin $\beta 7$ (D-5) is recommended for detection of Integrin $\beta 7$ of human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μg per 100-500 μg 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 $\beta 7$ siRNA (h): sc-35682, Integrin $\beta 7$ shRNA Plasmid (h): sc-35682-SH and Integrin $\beta 7$ shRNA (h) Lentiviral Particles: sc-35682-V.

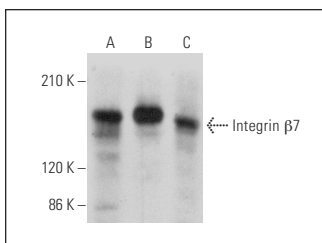
Molecular Weight of Integrin $\beta 7$: 140 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, Raji whole cell lysate: sc-364236 or Ramos cell lysate: sc-2216.

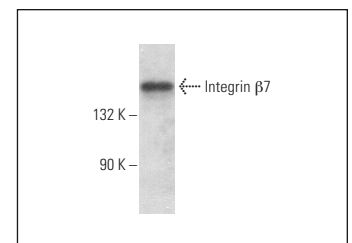
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG λ BP-HRP: sc-516132 or m-IgG λ BP-HRP (Cruz Marker): sc-516132-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). 3) Immunofluorescence: use m-IgG λ BP-FITC: sc-516185 or m-IgG λ BP-PE: sc-516186 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



Integrin $\beta 7$ (D-5): sc-515397. Western blot analysis of Integrin $\beta 7$ expression in 293 (A), Ramos (B) and K-562 (C) whole cell lysates.



Integrin $\beta 7$ (D-5): sc-515397. Western blot analysis of Integrin $\beta 7$ expression in Raji whole cell lysate.

SELECT PRODUCT CITATIONS

- Kerhervé, M., et al. 2022. Neuropilin-1 modulates the 3D invasive properties of glioblastoma stem-like cells. *Front. Cell Dev. Biol.* 10: 981583.

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.

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