

# Integrin $\alpha 5$ (D-9): sc-166666

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA5 (human) mapping to 12q13.13; Itga5 (mouse) mapping to 15 F3.

## SOURCE

Integrin  $\alpha 5$  (D-9) is a mouse monoclonal antibody raised against amino acids 840-943 of Integrin  $\alpha 5$  of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Integrin  $\alpha 5$  (D-9) is recommended for detection of Integrin  $\alpha 5$  of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\alpha 5$  siRNA (h): sc-29372, Integrin  $\alpha 5$  siRNA (m): sc-35687, Integrin  $\alpha 5$  shRNA Plasmid (h): sc-29372-SH, Integrin  $\alpha 5$  shRNA Plasmid (m): sc-35687-SH, Integrin  $\alpha 5$  shRNA (h) Lentiviral Particles: sc-29372-V and Integrin  $\alpha 5$  shRNA (m) Lentiviral Particles: sc-35687-V.

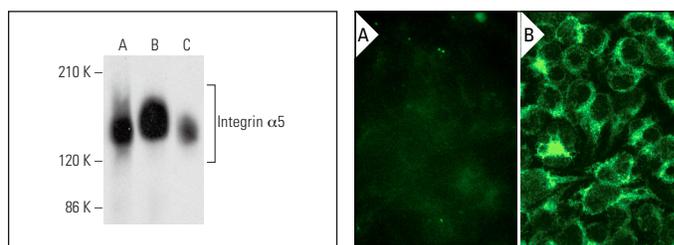
Molecular Weight of Integrin  $\alpha 5$ : 150 kDa.

Positive Controls: HeLa + IL-6 cell lysate: sc-24687, U-937 cell lysate: sc-2239 or human placenta extract: sc-363772.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  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). 3) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  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  $\alpha 5$  (D-9): sc-166666. Western blot analysis of Integrin  $\alpha 5$  expression in human placenta tissue extract (A) and U-937 (B) and IL-6 treated HeLa (C) whole cell lysates.

Integrin  $\alpha 5$  (D-9): sc-166666. Immunofluorescence staining of methanol-fixed untransfected (A) and human Integrin  $\alpha 5$  transfected HEK 293T cells (B).

## SELECT PRODUCT CITATIONS

- Schordan, S., et al. 2011.  $\alpha_V$ -Integrins mediate the mechanoprotective action of osteopontin in podocytes. *Am. J. Physiol. Renal Physiol.* 300: F119-F132.
- Mitsui, Y., et al. 2012. Comparative studies on glycoproteins expressing poly(lactosamine)-type N-glycans in cancer cells. *J. Pharm. Biomed. Anal.* 70: 718-726.

## 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](http://www.scbt.com) for detailed protocols and support products.



See **Integrin  $\alpha 5$  (C-9): sc-376199** for Integrin  $\alpha 5$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.