

# Integrin $\alpha 6$ (mAB-5A): sc-59920

## 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

1. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
2. 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.
3. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
4. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
5. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
6. Chung, J., Bachelder, R.E., Lipscomb, E.A., Shaw, L.M. and Mercurio, A.M. 2002. Integrin  $\alpha 6 \beta 4$  regulation of eIF-4E activity and VEGF translation: a survival mechanism for carcinoma cells. *J. Cell Biol.* 158: 165-174.
7. Kazarov, A.R., Yang, X., Stipp, C.S., Sehgal, B. and Hemler, M.E. 2002. An extracellular site on tetraspanin CD151 determines  $\alpha 3$  and  $\alpha 6$  Integrin-dependent cellular morphology. *J. Cell Biol.* 158: 1299-1309.
8. Russell, A.J., Fincher, E.F., Millman, L., Smith, R., Vela, V., Waterman, E.A., Dey, C.N., Guide, S., Weaver, V.M. and Marinkovich, M.P. 2003.  $\alpha 6 \beta 4$  Integrin regulates keratinocyte chemotaxis through differential GTPase activation and antagonism of  $\alpha 3 \beta 1$  Integrin. *J. Cell Sci.* 116: 3543-3556.
9. Chung, J., Yoon, S.O., Lipscomb, E.A. and Mercurio, A.M. 2004. The Met receptor and  $\alpha 6 \beta 4$  Integrin can function independently to promote carcinoma invasion. *J. Biol. Chem.* 279: 32287-32293.

## CHROMOSOMAL LOCATION

Genetic locus: Itga6 (mouse) mapping to 2 C2.

## SOURCE

Integrin  $\alpha 6$  (mAB-5A) is a mouse monoclonal antibody raised against Integrin  $\alpha 6$  of rat origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

## APPLICATIONS

Integrin  $\alpha 6$  (mAB-5A) is recommended for detection of Integrin  $\alpha 6$  of mouse and rat origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells); non cross-reactive with rat fibroblasts.

Suitable for use as control antibody for Integrin  $\alpha 6$  siRNA (m): sc-43130, Integrin  $\alpha 6$  shRNA Plasmid (m): sc-43130-SH and Integrin  $\alpha 6$  shRNA (m) Lentiviral Particles: sc-43130-V.

Molecular Weight of Integrin  $\alpha 6$  proform: 140 kDa.

Molecular Weight of Integrin  $\alpha 6$  heavy chain: 120 kDa.

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:  
1) 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.

## SELECT PRODUCT CITATIONS

1. Jan, H.M., Wei, M.F., Peng, C.L., Lin, S.J., Lai, P.S. and Shieh, M.J. 2012. The use of polyethylenimine-DNA to topically deliver hTERT to promote hair growth. *Gene Ther.* 19: 86-93.
2. Ma, M., Hua, S., Min, X., Wang, L., Li, J., Wu, P., Liang, H., Zhang, B., Chen, X. and Xiang, S. 2022. p53 positively regulates the proliferation of hepatic progenitor cells promoted by laminin-521. *Signal Transduct. Target. Ther.* 7: 290.

## 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  $\alpha 6$  (F-6): sc-374057** for Integrin  $\alpha 6$  antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.