

Integrin $\alpha 6$ (3H1512): sc-71423

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.
- Chung, J., et al. 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.

CHROMOSOMAL LOCATION

Genetic locus: ITGA6 (human) mapping to 2q31.1.

SOURCE

Integrin $\alpha 6$ (3H1512) is a mouse monoclonal antibody raised against Integrin $\alpha 6/\beta 4$ from A-431 cells of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\alpha 6$ (3H1512) is available conjugated to either phycoerythrin (sc-71423 PE) or fluorescein (sc-71423 FITC), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM.

STORAGE

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

APPLICATIONS

Integrin $\alpha 6$ (3H1512) is recommended for detection of Integrin $\alpha 6$ of human origin by Western Blotting (starting dilution 1:200, 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 flow cytometry (1 μ g per 1 x 10⁶ cells).

Suitable for use as control antibody for Integrin $\alpha 6$ siRNA (h): sc-43129, Integrin $\alpha 6$ shRNA Plasmid (h): sc-43129-SH and Integrin $\alpha 6$ shRNA (h) Lentiviral Particles: sc-43129-V.

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

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

Positive Controls: human platelet extract: sc-363773, DU 145 cell lysate: sc-2268 or Hep G2 cell lysate: sc-2227.

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 A/G PLUS-Agarose: sc-2003 (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.

SELECT PRODUCT CITATIONS

- Liu, W.F., et al. 2011. Role of tetraspanin CD151- $\alpha 3/\alpha 6$ integrin complex: implication in angiogenesis CD151-integrin complex in angiogenesis. *Int. J. Biochem. Cell Biol.* 43: 642-650.
- Kwon, J., et al. 2013. Integrin $\alpha 6$: a novel therapeutic target in esophageal squamous cell carcinoma. *Int. J. Oncol.* 43: 1523-1530.
- Kidwai, F.K., et al. 2014. Differentiation of epidermal keratinocytes from human embryonic stem cells. *Methods Mol. Biol.* 1195: 13-22.
- Villegas-Pineda, J.C., et al. 2015. Integrins and haptoglobin: molecules overexpressed in ovarian cancer. *Pathol. Res. Pract.* 211: 973-981.
- Villegas-Pineda, J.C., et al. 2017. The translational blocking of $\alpha 5$ and $\alpha 6$ integrin subunits affects migration and invasion, and increases sensitivity to carboplatin of SKOV-3 ovarian cancer cell line. *Exp. Cell Res.* 351: 127-134.
- Wu, Y., et al. 2019. ITGA6 and RPSA synergistically promote pancreatic cancer invasion and metastasis via PI3K and MAPK signaling pathways. *Exp. Cell Res.* 379: 30-47.

RESEARCH USE

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