SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α6 (MP 4F10): sc-53356

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

1. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. Cell 69: 11-25.
2. Miyamoto, S., et al. 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., et al. 2002. Integrin α6 β4 regulation of eIF-4E activity and VEGF translation: a survival mechanism for carcinoma cells. J. Cell Biol. 158: 165-174.
7. Kazarov, A.R., et al. 2002. An extracellular site on tetraspanin CD151 determines α3 and α6 Integrin-dependent cellular morphology. J. Cell Biol. 158: 1299-1309.

CHROMOSOMAL LOCATION

Genetic locus: ITGA6 (human) mapping to 2q31.1; Itga6 (mouse) mapping to 2 C2.

SOURCE

Integrin α6 (4F10) is a mouse monoclonal antibody raised against SW1222 colorectal cell line of human origin.

PRODUCT

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

Integrin α6 (4F10) is available conjugated to either phycoerythrin (sc-53356 PE) or fluorescein (sc-53356 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin α6 (4F10) is recommended for detection of Integrin α6 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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 flow cytometry (1 µg per 1 x 10^6 cells).

Suitable for use as control antibody for Integrin α6 siRNA (h): sc-43129, Integrin α6 siRNA (m): sc-43130, Integrin α6 shRNA Plasmid (h): sc-43129-SH, Integrin α6 shRNA Plasmid (m): sc-43130-SH, Integrin α6 shRNA (h) Lentiviral Particles: sc-43129-V and Integrin α6 shRNA (m) Lentiviral Particles: sc-43130-V.

Molecular Weight of Integrin α6 proform: 140 kDa.

Molecular Weight of Integrin α6 heavy chain: 120 kDa.

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

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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. Seano, G., et al. 2014. Endothelial podosome rosettes regulate vascular branching in tumour angiogenesis. Nat. Cell Biol. 16: 931-941, 941-948.
2. Haas, T.L., et al. 2017. Integrin α7 is a functional marker and potential therapeutic target in glioblastoma. Cell Stem Cell 21: 35-50.e9.
3. Mohanty, A., et al. 2020. A non-genetic mechanism involving the Integrin β4/paxillin axis contributes to chemoresistance in lung cancer. iScience 23: 101496.

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.

CONJUGATES

See **Integrin α6 (F-6): sc-374057** for Integrin α6 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.