SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α5 (1): sc-136224

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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., et al. 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. Orecchia, A., et al. 2003. Vascular endothelial growth factor receptor-1 is deposited in the extracellular matrix by endothelial cells and is a ligand for the α5/β1 Integrin. J. Cell Sci. 116: 3479-3489.
7. Mould, A.P., et al. 2003. Role of ADMIDAS cation-binding site in ligand recognition by Integrin α5/β1. J. Biol. Chem. 278: 51622-51629.

CHROMOSOMAL LOCATION

Genetic locus: ITGA5 (human) mapping to 12q13.13.

SOURCE

Integrin α5 (1) is a mouse monoclonal antibody raised against amino acids 853-1002 of Integrin α5 of human origin.

PRODUCT

Each vial contains 50 µg IgG_{2a} in 0.5 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-136224 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

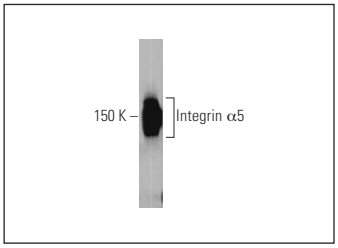
Integrin α5 (1) is recommended for detection of Integrin α5 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

Suitable for use as control antibody for Integrin α5 siRNA (h): sc-29372, Integrin α5 shRNA Plasmid (h): sc-29372-SH and Integrin α5 shRNA (h) Lentiviral Particles: sc-29372-V.

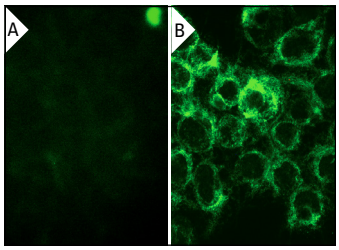
Molecular Weight of Integrin α5: 150 kDa.

Positive Controls: HeLa + IL-6 cell lysate: sc-24687, HeLa whole cell lysate: sc-2200 or U-937 cell lysate: sc-2239.

DATA



Integrin α5 (1): sc-136224. Western blot analysis of Integrin α5 expression in HeLa whole cell lysate.



Integrin α5 (1): sc-136224. Immunofluorescence staining of methanol-fixed untransfected (**A**) and human Integrin α5 transfected HEK 293T cells (**B**).

SELECT PRODUCT CITATIONS

1. Zhang, X., et al. 2015. MicroRNA-26a promotes anoikis in human hepatocellular carcinoma cells by targeting α5 Integrin. Oncotarget 6: 2277-2789.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CONJUGATES

See **Integrin α5 (C-9): sc-376199** for Integrin α5 antibody conjugates, including AC, HRP, FITC, PE, and Alexa Fluor® 488, 546, 594, 647, 680 and 790.