

Integrin α 1 (TS2/7.1.1): sc-81733

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.

CHROMOSOMAL LOCATION

Genetic locus: ITGA1 (human) mapping to 5q11.2.

SOURCE

Integrin α 1 (TS2/7.1.1) is a mouse monoclonal antibody raised against human Integrin α 1.

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. Also available azide-free for mitogenic activity assays, sc-81733 L, 200 μ g/0.1 ml.

Integrin α 1 (TS2/7.1.1) is available conjugated to either phycoerythrin (sc-81733 PE) or fluorescein (sc-81733 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.

PROTOCOLS

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

APPLICATIONS

Integrin α 1 (TS2/7.1.1) is recommended for detection of Integrin α 1 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 α 1 siRNA (h): sc-43125, Integrin α 1 shRNA Plasmid (h): sc-43125-SH and Integrin α 1 shRNA (h) Lentiviral Particles: sc-43125-V.

Molecular Weight of Integrin α 1: 200 kDa.

Positive Controls: SK-N-SH cell lysate: sc-2410.

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

1. Teklemariam, T., et al. 2011. Functional analysis of a recombinant PIII-SVMP, GST-acocostatin; an apoptotic inducer of HUVEC and HeLa, but not SK-MEL-28 cells. *Toxicol* 57: 646-656.
2. Lucena, S.E., et al. 2012. Anti-invasive and anti-adhesive activities of a recombinant disintegrin, r-vidistatin 2, derived from the Prairie rattlesnake (*Crotalus viridis viridis*). *Toxicol* 60: 31-39.
3. Kandasamy, K., et al. 2014. Polysulfone membranes coated with polymerized 3,4-dihydroxy-L-phenylalanine are a versatile and cost-effective synthetic substrate for defined long-term cultures of human pluripotent stem cells. *Biomacromolecules* 15: 2067-2078.
4. Xu, B., et al. 2020. Galectin-1-related modulation of trophoblast endothelial interactions by Integrins α 1 and β 1. *Reprod. Sci.* 27: 1097-1109.

RESEARCH USE

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