

Integrin α E (BP6): sc-53357

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. Cerf-Bensussan, N., et al. 1992. The human intraepithelial lymphocyte marker HML-1 is an integrin consisting of a β 7 subunit associated with a distinctive α chain. *Eur. J. Immunol.* 22: 273-277.
2. Lefrançois, L. 1992. Extrathymic differentiation of intraepithelial lymphocytes: generation of a separate and unequal T cell repertoire? *Immunol. Today* 12: 436-438.
3. Roberts, K. and Kilshaw, P.J. 1993. The mucosal T cell Integrin α M290 β 7 recognizes a epithelial cell lines. *Eur. J. Immunol.* 23: 1630-1635.
4. Lefrançois, L., et al. 1994. Developmental expression of the α EL/ β 7 Integrin on T cell receptor γ δ and T cell receptor α β T cells. *Eur. J. Immunol.* 24: 635-640.
5. Reimann, J. and Rudolph, A. 1995. Co-expression of CD8 α in CD4⁺ T cell receptor α β + T cells migrating into the murine small intestine epithelial layer. *Eur. J. Immunol.* 25: 1580-1588.
6. Hadley, G.A., et al. 1997. The epithelial cell-specific integrin, CD103 (α E Integrin), defines a novel subset of alloreactive CD8⁺ CTL. *J. Immunol.* 159: 3748-3756.
7. Schön, M.P., et al. 1999. Mucosal T lymphocyte numbers are selectively reduced in Integrin α E (CD103)-deficient mice. *J. Immunol.* 162: 6641-6649.
8. Strauch, U.G., et al. 2001. Integrin α E (CD103) β 7 mediates adhesion to intestinal microvascular endothelial cell lines via an E-cadherin-independent interaction. *J. Immunol.* 166: 3506-3514.
9. Corps, E., et al. 2001. Recognition of E-cadherin by Integrin α E/ β 7: requirement for cadherin dimerization and implications for cadherin and integrin function. *J. Biol. Chem.* 276: 30862-30870.

CHROMOSOMAL LOCATION

Genetic locus: ITGAE (human) mapping to 17p13.2.

SOURCE

Integrin α E (BP6) is a mouse monoclonal antibody raised against Hairy cell spleen lysate 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.

APPLICATIONS

Integrin α E (BP6) is recommended for detection of Integrin α E of human origin by immunoprecipitation [1-2 μ g per 100-500 μ g 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 α E siRNA (h): sc-35690, Integrin α E shRNA Plasmid (h): sc-35690-SH and Integrin α E shRNA (h) Lentiviral Particles: sc-35690-V.

Molecular Weight of Integrin α E: 150 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 2) 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. Zhang, R., et al. 2021. Retinoblastoma cell-derived Twist protein promotes regulatory T cell development. *Cancer Immunol. Immunother.* 70: 1037-1048.

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 for detailed protocols and support products.