SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin αE (OX62): sc-53085

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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. Cerf-Bensussan, N., et al. 1992. The human intraepithelial lymphocyte marker HML-1 is an integrin consisting of a β7 subunit associated with a distinctive a 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 β7 recognizes a epithelial cell lines. Eur. J. Immunol. 23: 1630-1635.
4. Lefrançois, L., et al. 1994. Developmental expression of the αIEL/β7 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 Rudolphi, A. 1995. Co-expression of CD8α in $CD4^+$ T cell receptor αβ + 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 (αE 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 αE (CD103)-deficient mice. J. Immunol. 162: 6641-6649.
8. Strauch, U.G., et al. 2001. Integrin αE (CD103) β7 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 αE/β7: requirement for cadherin dimerization and implications for cadherin and integrin function. J. Biol. Chem. 276: 30862-30870.

CHROMOSOMAL LOCATION

Genetic locus: Itgae (mouse) mapping to 11 B4.

RESEARCH USE

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

SOURCE

Integrin αE (OX62) is a mouse monoclonal antibody raised against thoracic duct dendritic cells of rat origin.

PRODUCT

Each vial contains 200 µg IgG_1 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin αE (OX62) is available conjugated to either phycoerythrin (sc-53085 PE) or fluorescein (sc-53085 FITC), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

Integrin αE (OX62) is recommended for detection of Integrin αE of mouse and rat origin by 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 αE siRNA (m): sc-43132, Integrin αE shRNA Plasmid (m): sc-43132-SH and Integrin αE shRNA (m) Lentiviral Particles: sc-43132-V.

Molecular Weight of Integrin αE: 150 kDa.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) 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. Li, Y., et al. 2019. Role of CCR7 on dendritic cell-mediated immune tolerance in the airways of allergy-induced asthmatic rats. Mol. Med. Rep. 20: 4425-4432.
2. Wang, Z.G., et al. 2021. Donor BMSC-derived small extracellular vesicles relieve acute rejection post-renal allograft through transmitting Loc108349490 to dendritic cells. Aging Cell 20: e13461.
3. Fitri, L.E., et al. 2023. *Bifidobacterium longum* administration diminishes parasitemia and inflammation during *Plasmodium berghei* infection in mice. J. Inflamm. Res. 16: 1393-1404.

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.