SANTA CRUZ BIOTECHNO

Integrin β1 (P4G11): sc-18845

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16α and 8β 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

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2. Balzac, F., et al. 1993. Expression and functional analysis of a cytoplasmic domain variant of the β1 integrin subunit. J. Cell Biol. 121: 171-178.
3. Balzac, F., et al. 1994. Expression of β1B integrin isoform in CHO cells results in a dominant negative effect on cell adhesion and motility. J. Cell Biol. 127: 557-565.
4. Zhidkova, N.I., et al. 1995. Novel isoform of β1 integrin expressed in skeletal and cardiac muscle. Biochem. Biophys. Res. Commun. 214: 279-285.
5. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. Science 267: 883-885.
6. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. Science 268: 233-239.
7. Sheppard, D. 1996. Epithelial integrins. Bioessays 18: 655-660.
8. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. Bioessays 18: 911-917.
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CHROMOSOMAL LOCATION

Genetic locus: ITGB1 (human) mapping to 10p11.22.

SOURCE

Integrin β1 (P4G11) is a mouse monoclonal antibody raised against purified human Integrin β1.

STORAGE

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

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. Also available azide-free for activation of cell adhesion, sc-18845 L, 200 µg/0.1 ml.

Integrin β1 (P4G11) is available conjugated to phycoerythrin (sc-18845 PE), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM.

APPLICATIONS

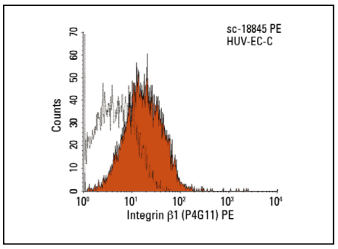
Integrin β1 (P4G11) is recommended for detection of Integrin β1 of human origin by flow cytometry (1 µg per 1 x 10^6 cells).

Integrin β1 (P4G11) is also recommended for detection of Integrin β1 in additional species, including rabbit and monkey.

Suitable for use as control antibody for Integrin β1 siRNA (h): sc-35674, Integrin β1 shRNA Plasmid (h): sc-35674-SH, Integrin β1 shRNA (h) Lentiviral Particles: sc-35674-V.

Molecular Weight of Integrin β1: 138 kDa.

DATA



Integrin β1 (P4G11) PE: sc-18845 PE. FCM analysis of HUV-EC-C cells. Black line histogram represents the isotype control, normal mouse IgG_1-PE: sc-2866.

SELECT PRODUCT CITATIONS

1. Scimone, M.L., et al. 2005. Migration of polymorphonuclear leucocytes is influenced by dendritic cells. Immunology 114: 375-385.
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RESEARCH USE

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