SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α5 (MFR5/5H10): sc-23941

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. 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: ITGA5 (human) mapping to 12q13.13; Itga5 (mouse) mapping to 15 F3.

SOURCE

Integrin α5 (MFR5/5H10) is a rat monoclonal antibody raised against activated C57BL/6 mouse spleen cells.

PRODUCT

Each vial contains 200 µg IgG_{2a} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin α5 (MFR5/5H10) is available conjugated to either phycoerythrin (sc-23941 PE) or fluorescein (sc-23941 FITC), 200 µg/ml, for 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.

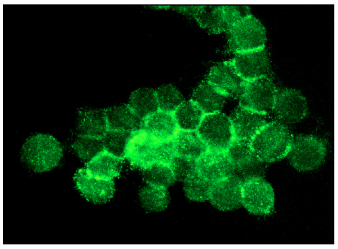
APPLICATIONS

Integrin α5 (MFR5/5H10) is recommended for detection of Integrin α5 of mouse, rat and human origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10^6 cells).

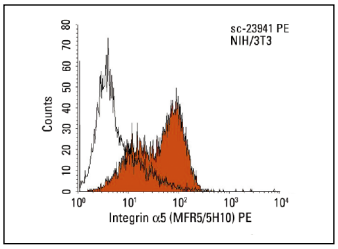
Suitable for use as control antibody for Integrin α5 siRNA (h): sc-29372, Integrin α5 siRNA (m): sc-35687, Integrin α5 shRNA Plasmid (h): sc-29372-SH, Integrin α5 shRNA Plasmid (m): sc-35687-SH, Integrin α5 shRNA (h) Lentiviral Particles: sc-29372-V and Integrin α5 shRNA (m) Lentiviral Particles: sc-35687-V.

Molecular Weight of Integrin α5: 150 kDa.

DATA



Integrin α5 (MFR5/5H10): sc-23941. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing membrane localization.



Integrin α5 (MFR5/5H10) PE: sc-23941 PE. FCM analysis of IL-6 stimulated NIH/3T3 cells. Black line histogram represents the isotype control, normal rat IgG_{2a}: sc-2872.

SELECT PRODUCT CITATIONS

1. Isaji, T., et al. 2009. N-glycosylation of the I-like domain of β1 Integrin is essential for β1 Integrin expression and biological function: Identification of the minimal N-glycosylation requirement for α5β1. J. Biol. Chem. 284: 12207-12216.

RESEARCH USE

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