SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β2 (P4H9): sc-13548

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

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

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. 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: ITGB2 (human) mapping to 21q22.3.

SOURCE

Integrin β2 (P4H9) is a mouse monoclonal antibody raised against activated T lymphocytes.

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 β2 (P4H9) is available conjugated to agarose (sc-13548 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-13548 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-13548 PE), fluorescein (sc-13548 FITC), Alexa Fluor® 488 (sc-13548 AF488), Alexa Fluor® 546 (sc-13548 AF546), Alexa Fluor® 594 (sc-13548 AF594) or Alexa Fluor® 647 (sc-13548 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-13548 AF680) or Alexa Fluor® 790 (sc-13548 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

STORAGE

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

APPLICATIONS

Integrin β2 (P4H9) is recommended for detection of Integrin β2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 β2 siRNA (h): sc-29374, Integrin β2 shRNA Plasmid (h): sc-29374-SH and Integrin β2 shRNA (h) Lentiviral Particles: sc-29374-V.

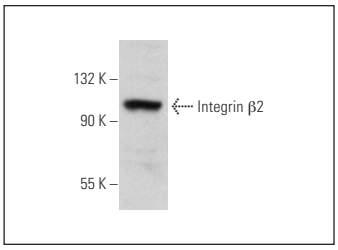
Molecular Weight of Integrin β2: 95 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

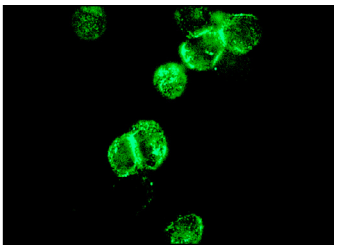
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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-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.

DATA



Integrin β2 (P4H9): sc-13548. Western blot analysis of Integrin β2 expression in K-562 whole cell lysate.



Integrin β2 (P4H9): sc-13548. Immunofluorescence staining of methanol-fixed HL-60 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Uehara, A., et al. 2004. Proinflammatory cytokines induce proteinase 3 as membrane-bound and secretory forms in human oral epithelial cells and antibodies to proteinase 3 activate the cells through protease-activated receptor-2. J. Immunol. 173: 4179-4189.
2. Yokoyama, S., et al. 2015. P4H9-detected molecule expression on spindle-shaped fibroblasts indicates malignant phenotype of colorectal cancer. Br. J. Cancer 113: 1454-1459.
3. Jin, S.H., et al. 2019. *M. leprae* interacts with the human epidermal keratinocytes, neonatal (HEKn) via the binding of laminin-5 with α-dystroglycan, integrin-β1, or -β4. PLoS Negl. Trop. Dis. 13: e0007339.

RESEARCH USE

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