SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α4 (B-2): sc-376334

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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. Takada, Y., et al. 1989. The primary structure of the α4 subunit of VLA-4: homology to other integrins and a possible cell-cell adhesion function. EMBO J. 8: 1361-1368.
2. Miyake, K., et al. 1991. Evidence for a role of the integrin VLA-4 in lympho-hemopoiesis. J. Exp. Med. 173: 599-607.
3. Rosen, G.D., et al. 1991. Characterization of the α4 integrin gene promoter. Proc. Natl. Acad. Sci. USA 88: 4094-4098.

CHROMOSOMAL LOCATION

Genetic locus: ITGA4 (human) mapping to 2q31.3; Itga4 (mouse) mapping to 2 C3.

SOURCE

Integrin α4 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1013-1032 at the C-terminus of Integrin α4 of human origin.

PRODUCT

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

Integrin α4 (B-2) is available conjugated to agarose (sc-376334 AC), 500 µg/ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-376334 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376334 PE), fluorescein (sc-376334 FITC), Alexa Fluor® 488 (sc-376334 AF488), Alexa Fluor® 546 (sc-376334 AF546), Alexa Fluor® 594 (sc-376334 AF594) or Alexa Fluor® 647 (sc-376334 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-376334 AF680) or Alexa Fluor® 790 (sc-376334 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-376334 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

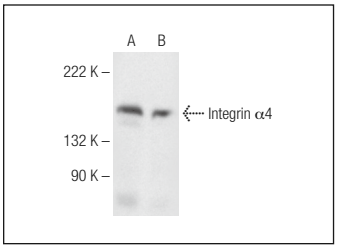
Integrin α4 (B-2) is recommended for detection of Integrin α4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Integrin α4 siRNA (h): sc-35685, Integrin α4 siRNA (m): sc-35686, Integrin α4 shRNA Plasmid (h): sc-35685-SH, Integrin α4 shRNA Plasmid (m): sc-35686-SH, Integrin α4 shRNA (h) Lentiviral Particles: sc-35685-V and Integrin α4 shRNA (m) Lentiviral Particles: sc-35686-V.

Molecular Weight of Integrin α4: 150 kDa.

Positive Controls: mouse liver extract: sc-2256, MOLT-4 cell lysate: sc-2233 or Jurkat whole cell lysate: sc-2204.

DATA



Integrin α4 (B-2): sc-376334. Western blot analysis of Integrin α4 expression in MOLT-4 (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Li, W., et al. 2012. SBF-1, a synthetic steroidal glycoside, inhibits melanoma growth and metastasis through blocking interaction between PDK1 and AKT3. Biochem. Pharmacol. 84: 172-181.
2. Park, J.H., et al. 2021. Genetically engineered cell membrane-coated nanoparticles for targeted delivery of dexamethasone to inflamed lungs. Sci. Adv. 7: eabf7820.
3. Li, Y., et al. 2022. CD47- and Integrin α4/β1-comodified-macrophage-membrane-coated nanoparticles enable delivery of colchicine to atherosclerotic plaque. Adv. Healthc. Mater. 11: e2101788.
4. Riffo, E., et al. 2022. The Sall2 transcription factor promotes cell migration regulating focal adhesion turnover and Integrin β1 expression. Front. Cell Dev. Biol. 10: 1031262.

STORAGE

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