

# Integrin $\alpha$ 4 (B-2): sc-376334

## BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane  $\alpha$  and  $\beta$  subunits. The 16  $\alpha$  and 8  $\beta$  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  $\alpha$ 4 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 lymphohemopoiesis. *J. Exp. Med.* 173: 599-607.

## CHROMOSOMAL LOCATION

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

## SOURCE

Integrin  $\alpha$ 4 (B-2) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1013-1032 at the C-terminus of Integrin  $\alpha$ 4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2b</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\alpha$ 4 (B-2) is available conjugated to agarose (sc-376334 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-376334 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-376334 PE), fluorescein (sc-376334 FITC), Alexa Fluor<sup>®</sup> 488 (sc-376334 AF488), Alexa Fluor<sup>®</sup> 546 (sc-376334 AF546), Alexa Fluor<sup>®</sup> 594 (sc-376334 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-376334 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-376334 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-376334 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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

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## STORAGE

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

## APPLICATIONS

Integrin  $\alpha$ 4 (B-2) is recommended for detection of Integrin  $\alpha$ 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g 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  $\alpha$ 4 siRNA (h): sc-35685, Integrin  $\alpha$ 4 siRNA (m): sc-35686, Integrin  $\alpha$ 4 shRNA Plasmid (h): sc-35685-SH, Integrin  $\alpha$ 4 shRNA Plasmid (m): sc-35686-SH, Integrin  $\alpha$ 4 shRNA (h) Lentiviral Particles: sc-35685-V and Integrin  $\alpha$ 4 shRNA (m) Lentiviral Particles: sc-35686-V.

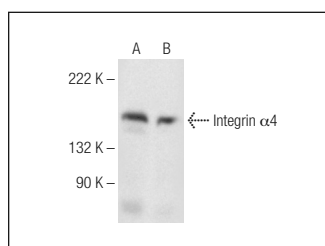
Molecular Weight of Integrin  $\alpha$ 4: 150 kDa.

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

## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> Hard-set Mounting Medium: sc-359850.

## DATA



Integrin  $\alpha$ 4 (B-2): sc-376334. Western blot analysis of Integrin  $\alpha$ 4 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.

## RESEARCH USE

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