

# Integrin $\alpha$ 4 (C-2): sc-365569

## 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.
3. Rosen, G.D., et al. 1991. Characterization of the Integrin  $\alpha$ 4 gene promoter. *Proc. Natl. Acad. Sci. USA* 88: 4094-4098.
4. Teixido, J., et al. 1992. Functional and structural analysis of VLA-4 Integrin  $\alpha$ 4 subunit cleavage. *J. Biol. Chem.* 267: 1786-1791.

## CHROMOSOMAL LOCATION

Genetic locus: ITGA4 (human) mapping to 2q31.3.

## SOURCE

Integrin  $\alpha$ 4 (C-2) is a mouse monoclonal antibody raised against amino acids 796-1005 mapping near the C-terminus of Integrin  $\alpha$ 4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin  $\alpha$ 4 (C-2) is available conjugated to agarose (sc-365569 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-365569 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-365569 PE), fluorescein (sc-365569 FITC), Alexa Fluor<sup>®</sup> 488 (sc-365569 AF488), Alexa Fluor<sup>®</sup> 546 (sc-365569 AF546), Alexa Fluor<sup>®</sup> 594 (sc-365569 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-365569 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-365569 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-365569 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

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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 (C-2) is recommended for detection of Integrin  $\alpha$ 4 of 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 shRNA Plasmid (h): sc-35685-SH and Integrin  $\alpha$ 4 shRNA (h) Lentiviral Particles: sc-35685-V.

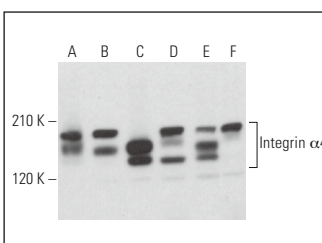
Molecular Weight of Integrin  $\alpha$ 4: 150 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233, Jurkat whole cell lysate: sc-2204 or GA-10 whole cell lysate: sc-364230.

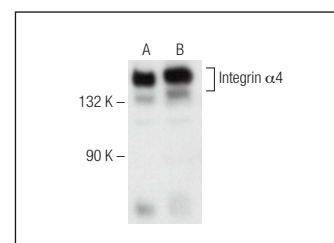
## RECOMMENDED SUPPORT REAGENTS

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 (C-2): sc-365569. Western blot analysis of Integrin  $\alpha$ 4 expression in GA-10 (A), CCRF-CEM (B), SUP-T1 (C), HEL 92.1.7 (D), NCI-H929 (E) and HL-60 (F) whole cell lysates.



Integrin  $\alpha$ 4 (C-2): sc-365569. Western blot analysis of Integrin  $\alpha$ 4 expression in Jurkat (A) and MOLT-4 (B) whole cell lysates.

## SELECT PRODUCT CITATIONS

1. Dong, X., et al. 2019. Neutrophil membrane-derived nanovesicles alleviate inflammation to protect mouse brain injury from ischemic stroke. *ACS Nano* 13: 1272-1283.
2. Gao, J., et al. 2023. Remote Co-loading of amphipathic acid drugs in neutrophil nanovesicles infilled with cholesterol mitigates lung bacterial infection and inflammation. *Biomaterials* 296: 122071.

## RESEARCH USE

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