

Integrin $\alpha 2$ (C-9): sc-74466

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 counter-receptors 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. Integrin $\alpha 2$ is responsible for adhesion of platelets and other cells to collagens. Modulation of collagen and collagenase gene expression force generation and organization of newly synthesized extracellular matrix.

REFERENCES

1. Takada, Y., et al. 1989. The primary structure of the VLA-2/collagen receptor $\alpha 2$ subunit (platelet GPIa): homology to other Integrins and the presence of a possible collagen-binding domain. *J. Cell Biol.* 109: 397-407.
2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.

CHROMOSOMAL LOCATION

Genetic locus: ITGA2 (human) mapping to 5q11.2; Itga2 (mouse) mapping to 13 D2.2.

SOURCE

Integrin $\alpha 2$ (C-9) is a mouse monoclonal antibody raised against amino acids 840-1132 mapping within an extracellular domain of Integrin $\alpha 2$ of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Integrin $\alpha 2$ (C-9) is available conjugated to agarose (sc-74466 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-74466 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-74466 PE), fluorescein (sc-74466 FITC), Alexa Fluor[®] 488 (sc-74466 AF488), Alexa Fluor[®] 546 (sc-74466 AF546), Alexa Fluor[®] 594 (sc-74466 AF594) or Alexa Fluor[®] 647 (sc-74466 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-74466 AF680) or Alexa Fluor[®] 790 (sc-74466 AF790), 200 μ 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

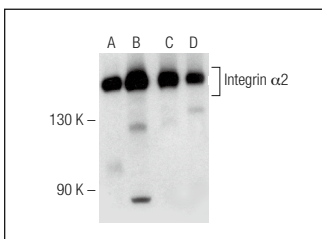
Integrin $\alpha 2$ (C-9) is recommended for detection of Integrin $\alpha 2$ of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (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 $\alpha 2$ siRNA (h): sc-29371, Integrin $\alpha 2$ siRNA (m): sc-35683, Integrin $\alpha 2$ shRNA Plasmid (h): sc-29371-SH, Integrin $\alpha 2$ shRNA Plasmid (m): sc-35683-SH, Integrin $\alpha 2$ shRNA (h) Lentiviral Particles: sc-29371-V and Integrin $\alpha 2$ shRNA (m) Lentiviral Particles: sc-35683-V.

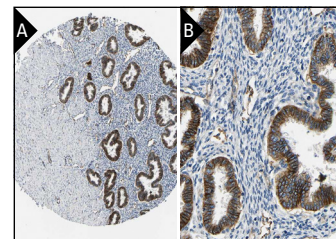
Molecular Weight of Integrin $\alpha 2$: 150 kDa.

Positive Controls: human platelet extract: sc-363773, HCT-116 whole cell lysate: sc-364175 or WiDr cell lysate: sc-24779.

DATA



Integrin $\alpha 2$ (C-9): sc-74466. Western blot analysis of Integrin $\alpha 2$ expression in human platelet extract (A), HCT-116 (B), WiDr (C) and HeLa (D) whole cell lysates.



Integrin $\alpha 2$ (C-9): sc-74466. Immunoperoxidase staining of formalin fixed, paraffin-embedded human corpus uterine tissue showing membrane and cytoplasmic staining of glandular cells at low (A) and high (B) magnification. Kindly provided by The Swedish Human Protein Atlas (HPA) program.

SELECT PRODUCT CITATIONS

1. Yahiro, K., et al. 2011. Identification of subtilase cytotoxin (SubAB) receptors whose signaling, in association with SubAB-induced BiP cleavage, is responsible for apoptosis in HeLa cells. *Infect. Immun.* 79: 617-627.
2. Ahat, E., et al. 2019. GRASP depletion-mediated Golgi destruction decreases cell adhesion and migration via the reduction of $\alpha 5\beta 1$ integrin. *Mol. Biol. Cell* 30: 766-777.
3. Lee, J.Y., et al. 2020. Muscle-derived lumican stimulates bone formation via integrin $\alpha 5\beta 1$ and the downstream ERK signal. *Front. Cell Dev. Biol.* 8: 565826.
4. Dorsch, M., et al. 2021. Statins affect cancer cell plasticity with distinct consequences for tumor progression and metastasis. *Cell Rep.* 37: 110056.
5. Yeung, C.C., et al. 2022. Circadian regulation of protein cargo in extracellular vesicles. *Sci. Adv.* 8: eabc9061.

RESEARCH USE

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