

# Integrin $\alpha$ 4 (C-20): sc-6589

## 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.

## CHROMOSOMAL LOCATION

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

## SOURCE

Integrin  $\alpha$ 4 (C-20) is available as either goat (sc-6589) or rabbit (sc-6589-R) polyclonal affinity purified antibody raised against a peptide mapping at the C-terminus of Integrin  $\alpha$ 4 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-6589 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Integrin  $\alpha$ 4 (C-20) is recommended for detection of Integrin  $\alpha$ 4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Integrin  $\alpha$ 4 (C-20) is also recommended for detection of Integrin  $\alpha$ 4 in additional species, including equine, canine, bovine and porcine.

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.

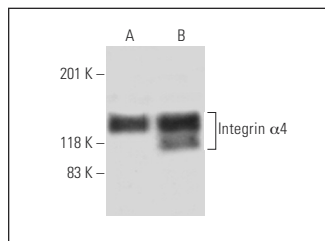
Molecular Weight of Integrin  $\alpha$ 4: 150 kDa.

Positive Controls: MOLT-4 cell lysate: sc-2233 or Jurkat whole cell lysate: sc-2204.

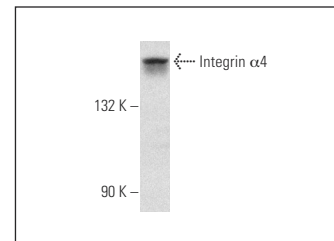
## STORAGE

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

## DATA



Integrin  $\alpha$ 4 (C-20): sc-6589. Western blot analysis of Integrin  $\alpha$ 4 expression in Jurkat (A) and alkaline phosphatase treated Jurkat (B) whole cell lysates.



Integrin  $\alpha$ 4 (C-20): sc-6589. Western blot analysis of Integrin  $\alpha$ 4 expression in MOLT-4 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Downs, K.M. 2002. Early placental ontogeny in the mouse. *Placenta* 23: 116-131.
- Tavaniotou, A., et al. 2003. Endometrial integrin expression in the early luteal phase in natural and stimulated cycles for *in vitro* fertilization. *Eur. J. Obstet. Gynecol. Reprod. Biol.* 108: 67-71.
- Yasuda, T., et al. 2003. Matrix metalloproteinase production by COOH-terminal heparin-binding fibronectin fragment in rheumatoid synovial cells. *Lab. Invest.* 83: 153-162.
- Robinson, E.E., et al. 2004. Fibronectin matrix assembly regulates  $\alpha$ 5/ $\beta$ 1-mediated cell cohesion. *Mol. Biol. Cell* 15: 973-981.
- Garmy-Susini, B., et al. 2005. Integrin  $\alpha$ 4/ $\beta$ 1-VCAM-1-mediated adhesion between endothelial and mural cells is required for blood vessel maturation. *J. Clin. Invest.* 115: 1542-1551.
- Kirschner, K.M., et al. 2006. The Wilms tumor suppressor WT1 promotes cell adhesion through transcriptional activation of the  $\alpha$ 4 Integrin gene. *J. Biol. Chem.* 281: 31930-31939.
- García-Bernal, D., et al. 2009. Chemokine-induced Zap70 kinase-mediated dissociation of the Vav1-talin complex activates  $\alpha$ 4 $\beta$ 1 integrin for T cell adhesion. *Immunity* 31: 953-964.

## RESEARCH USE

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



Try **Integrin  $\alpha$ 4 (C-2): sc-365569** or **Integrin  $\alpha$ 4 (A-7): sc-365209**, our highly recommended monoclonal alternatives to Integrin  $\alpha$ 4 (C-20).