

# Integrin $\beta 8$ (C-19): sc-6638

## 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. Moyle, M., et al. 1991. Cloning and expression of a divergent integrin subunit  $\beta 8$ . *J. Biol. Chem.* 266: 19650-19658.
2. Hynes, R.O. 1992. Integrins: versatility, modulation and signaling in cell adhesion. *Cell* 69: 11-25.
3. Miyamoto, S., et al. 1995. Synergistic roles for receptor occupancy and aggregation in integrin transmembrane function. *Science* 267: 883-885.
4. Venstrom, K., et al. 1995.  $\beta 8$  integrins mediate interactions of chick sensory neurons with Laminin-1, Collagen IV and Fibronectin. *Mol. Biol. Cell* 6: 419-431.
5. Clark, E.A. and Brugge, J.S. 1995. Integrins and signal transduction pathways: the road taken. *Science* 268: 233-239.
6. Sheppard, D. 1996. Epithelial integrins. *Bioessays* 18: 655-660.
7. Juliano, R. 1996. Cooperation between soluble factors and integrin-mediated cell anchorage in the control of cell growth and differentiation. *Bioessays* 18: 911-917.
8. Testaz, S., et al. 1999. Adhesion and migration of avian neural crest cells on Fibronectin require the cooperating activities of multiple integrins of the  $\beta 1$  and  $\beta 3$  families. *J. Cell Sci.* 112: 4715-4728.

## CHROMOSOMAL LOCATION

Genetic locus: ITGB8 (human) mapping to 7p21.1.

## SOURCE

Integrin  $\beta 8$  (C-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Integrin  $\beta 8$  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-6638 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

Integrin  $\beta 8$  (C-19) is recommended for detection of Integrin  $\beta 8$  of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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  $\beta 8$  (C-19) is also recommended for detection of Integrin  $\beta 8$  in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Integrin  $\beta 8$  siRNA (h): sc-43137, Integrin  $\beta 8$  shRNA Plasmid (h): sc-43137-SH and Integrin  $\beta 8$  shRNA (h) Lentiviral Particles: sc-43137-V.

Molecular Weight of Integrin  $\beta 8$ : 97 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## SELECT PRODUCT CITATIONS

1. Murase, S. and Horwitz, A.F. 2002. Deleted in colorectal carcinoma and differentially expressed integrins mediate the directional migration of neural precursors in the rostral migratory stream. *J. Neurosci.* 22: 3568-3579.
2. Riemenschneider, M.J., et al. 2005. *In situ* analysis of integrin and growth factor receptor signaling pathways in human glioblastomas suggests overlapping relationships with focal adhesion kinase activation. *Am. J. Pathol.* 167: 1379-1387.
3. Dummula, K., et al. 2010. Development of integrins in the vasculature of germinal matrix, cerebral cortex, and white matter of fetuses and premature infants. *J. Neurosci. Res.* 88: 1193-1204.

## STORAGE

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

## RESEARCH USE

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



Try **Integrin  $\beta 8$  (E-6): sc-514150**, our highly recommended monoclonal alternative to Integrin  $\beta 8$  (C-19).