

Integrin $\beta 5$ (E-19): sc-5401

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16α and 8β 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.

CHROMOSOMAL LOCATION

Genetic locus: ITGB5 (human) mapping to 3q21.2; Itgb5 (mouse) mapping to 16 B3.

SOURCE

Integrin $\beta 5$ (E-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Integrin $\beta 5$ of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-5401 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Integrin $\beta 5$ (E-19) is recommended for detection of Integrin $\beta 5$ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, 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).

Integrin $\beta 5$ (E-19) is also recommended for detection of Integrin $\beta 5$ in additional species, including equine.

Suitable for use as control antibody for Integrin $\beta 5$ siRNA (h): sc-35680, Integrin $\beta 5$ siRNA (m): sc-35681, Integrin $\beta 5$ shRNA Plasmid (h): sc-35680-SH, Integrin $\beta 5$ shRNA Plasmid (m): sc-35681-SH, Integrin $\beta 5$ shRNA (h) Lentiviral Particles: sc-35680-V and Integrin $\beta 5$ shRNA (m) Lentiviral Particles: sc-35681-V.

Molecular Weight of Integrin $\beta 5$: 100 kDa.

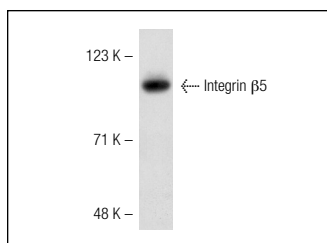
STORAGE

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

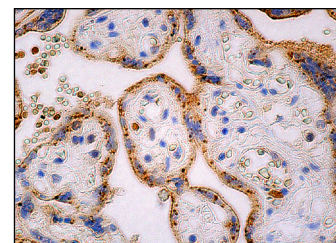
RESEARCH USE

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

DATA



Integrin $\beta 5$ (E-19): sc-5401. Western blot analysis of Integrin $\beta 5$ expression in SW480 whole cell lysate.



Integrin $\beta 5$ (E-19): sc-5401. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing cytoplasmic staining of trophoblastic cells.

SELECT PRODUCT CITATIONS

- Kintscher, U., et al. 2002. PPAR α inhibits TGF- β -induced $\beta 5$ integrin transcription in vascular smooth muscle cells by interacting with Smad4. *Circ. Res.* 91: e35-e44.
- Saintier, D., et al. 2004. 17 β -estradiol downregulates $\beta 3$ -integrin expression in differentiating and mature human osteoclasts. *J. Cell. Physiol.* 198: 269-276.
- Zoppi, N., et al. 2007. The FN13 peptide inhibits human tumor cells invasion through the modulation of $\alpha v \beta 3$ integrins organization and the inactivation of ILK pathway. *Biochim. Biophys. Acta* 1773: 747-763.
- Thews, O., et al. 2009. Impact of reactive oxygen species on the expression of adhesion molecules *in vivo*. *Adv. Exp. Med. Biol.* 645: 95-100.
- Feugang, J.M., et al. 2009. Two-stage genome-wide association study identifies integrin $\beta 5$ as having potential role in bull fertility. *BMC Genomics* 10: 176.
- Blair, H.C., et al. 2009. Osteopetrosis with micro-lacunar resorption because of defective integrin organization. *Lab. Invest.* 89: 1007-1017.
- Zhang, Y., et al. 2011. Isthmin exerts pro-survival and death-promoting effect on endothelial cells through $\alpha v \beta 5$ integrin depending on its physical state. *Cell Death Dis.* 2: e153.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.