

Integrin $\alpha 3$ (I-19): sc-6592

BACKGROUND

Integrins are heterodimers composed of noncovalently associated transmembrane α and β subunits. The 16 α and eight β subunits heterodimerize to produce more than 20 different receptors. Most Integrin receptors bind ligands that are components of the extracellular matrix, including Fibronectin, Col-lagen 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. The Integrin $\alpha 3$ chain, also known as very late (activation) antigen 3 (VLA-3), very common antigen 2 (VCA-2), extracellular matrix receptor 1 (ECMR1), and galactoprotein b3 (GAPB3), undergoes post-translational cleavage in the extracellular domain to yield disulfide-linked light and heavy chains that join with $\beta 1$ to form an Integrin that interacts with many extracellular-matrix proteins.

CHROMOSOMAL LOCATION

Genetic locus: ITGA3 (human) mapping to 17q21.33.

SOURCE

Integrin $\alpha 3$ (I-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of Integrin $\alpha 3$ 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-6592 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Integrin $\alpha 3$ (I-19) is recommended for detection of Integrin $\alpha 3$ heavy chain of 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Integrin $\alpha 3$ (I-19) is also recommended for detection of Integrin $\alpha 3$ heavy chain in additional species, including bovine.

Suitable for use as control antibody for Integrin $\alpha 3$ siRNA (h): sc-35684, Integrin $\alpha 3$ shRNA Plasmid (h): sc-35684-SH and Integrin $\alpha 3$ shRNA (h) Lentiviral Particles: sc-35684-V.

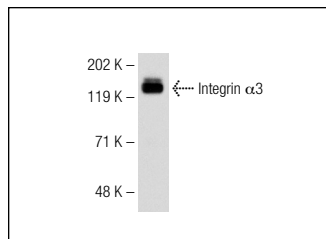
Molecular Weight of Integrin 3: 150 kDa.

Positive Controls: Caki-1 cell lysate: sc-2224, HuT 78 whole cell lysate, sc-2208 or A-431 whole cell lysate: sc-2201.

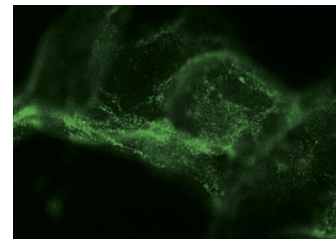
STORAGE

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

DATA



Integrin $\alpha 3$ (I-19): sc-6592. Western blot analysis of Integrin $\alpha 3$ expression in A-431 whole cell lysate.



Integrin $\alpha 3$ (I-19): sc-6592. Immunofluorescence staining of methanol-fixed Caki-1 cells showing membrane staining.

SELECT PRODUCT CITATIONS

1. Tysnes, B.B., et al. 2001. Bromelain reversibly inhibits invasive properties of glioma cells. *Neoplasia* 3: 469-479.
2. Nishiuchi, R., et al. 2005. Potentiation of the ligand-binding activity of Integrin $\alpha 3 \beta 1$ via association with tetraspanin CD151. *Proc. Natl. Acad. Sci. USA* 102: 1939-1944.
3. Elkaim, R., et al. 2006. Paxillin phosphorylation and integrin expression in osteoblasts infected by *Porphyromonas gingivalis*. *Arch. Oral Biol.* 51: 761-768.
4. 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.
5. Yamada, M., et al. 2008. The tetraspanin CD151 regulates cell morphology and intracellular signaling on laminin-511. *FEBS J.* 275: 3335-3351.
6. Seo, D.W., et al. 2008. TIMP-2 disrupts FGF-2-induced downstream signaling pathways. *Microvasc. Res.* 76: 145-151.
7. Saleh, M.A., et al. 2011. Distinct actions of ETA selective versus combined ETA/ETB receptor antagonists in early diabetic kidney disease. *J. Pharmacol. Exp. Ther.* 338: 263-270.
8. Suvanto, M., et al. 2015. Podocyte proteins in congenital and minimal change nephrotic syndrome. *Clin. Exp. Nephrol.* 19: 481-488.

RESEARCH USE

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



Try Integrin $\alpha 3$ (A-3): sc-374242 or Integrin $\alpha 3$ (E-8): sc-393298, our highly recommended monoclonal alternatives to Integrin $\alpha 3$ (I-19). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see Integrin $\alpha 3$ (A-3): sc-374242.