SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin α4 (H-210): sc-14008

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrins are heterodimers composed of non-covalently 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 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 α4 (H-210) is a rabbit polyclonal antibody raised against amino acids 796-1005 mapping near the C-terminus of Integrin α4 of human origin.

PRODUCT

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

APPLICATIONS

Integrin α4 (H-210) is recommended for detection of Integrin α4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 α4 (H-210) is also recommended for detection of Integrin α4 in additional species, including canine and porcine.

Suitable for use as control antibody for Integrin α4 siRNA (h): sc-35685, Integrin α4 siRNA (m): sc-35686, Integrin α4 shRNA Plasmid (h): sc-35685-SH, Integrin α4 shRNA Plasmid (m): sc-35686-SH, Integrin α4 shRNA (h) Lentiviral Particles: sc-35685-V and Integrin α4 shRNA (m) Lentiviral Particles: sc-35686-V.

Molecular Weight of Integrin α4: 150 kDa.

Positive Controls: Integrin α4 (h): 293T Lysate: sc-128889, Jurkat whole cell lysate: sc-2204 or HeLa whole cell lysate: sc-2200.

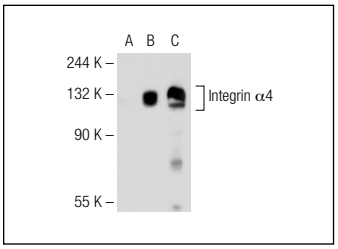
RESEARCH USE

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

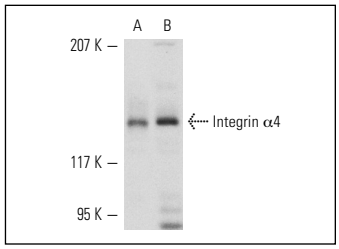
STORAGE

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

DATA



Integrin α4 (H-210): sc-14008. Western blot analysis of Integrin α4 expression in non-transfected 293T: sc-117752 (**A**), human Integrin α4 transfected 293T: sc-128889 (**B**) and HeLa (**C**) whole cell lysates.



Integrin α4 (H-210): sc-14008. Western blot analysis of Integrin α4 expression in MOLT-4 (**A**) and Jurkat (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Thannickal, V.J., et al. 2003. Myofibroblast differentiation by transforming growth factor-β1 is dependent on cell adhesion and integrin signaling via focal adhesion kinase. J. Biol. Chem. 278: 12384-12389.
2. Garmy-Susini, B., et al. 2005. Integrin α4β1-VCAM-1-mediated adhesion between endothelial and mural cells is required for blood vessel maturation. J. Clin. Invest. 115: 1542-1551.
3. Zhao, J., et al. 2008. Inhibition of α4 integrin mediated adhesion was involved in the reduction of B16-F10 melanoma cells lung colonization in C57BL/6 mice treated with gambogic acid. Eur. J. Pharmacol. 589: 127-131.
4. Yamamoto, H., et al. 2008. Induction of cell adhesion by galectin-8 and its target molecules in Jurkat T-cells. J. Biochem. 143: 311-324.
5. Lee, S.A., et al. 2009. The extracellular loop 2 of TM4SF5 inhibits integrin α2 on hepatocytes under collagen type I environment. Carcinogenesis 30: 1872-1879.
6. 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.
7. Yuan, Y., et al. 2013. The role of ROS in ionizing radiation-induced VLA-4 mediated adhesion of RAW264.7 cells to VCAM-1 under flow conditions. 179: 62-68.

PROTOCOLS

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