SANTA CRUZ BIOTECHNOLOGY, INC.

Integrin β4 (H-101): sc-9090

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Integrins are heterodimers composed of noncovalently 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. Integrin β4 (ITGB4), also known as CD104, is a 1,822 amino acid single-pass type I membrane protein belonging to the Integrin β chain family. Known to associate with Integrin α6, Integrin β4 functions as a receptor for Laminin and is predominantly expressed by epithelia. Integrin β4 exists as five alternatively spliced isoforms that are encoded by a gene located on human chromosome 17q25.1.

CHROMOSOMAL LOCATION

Genetic locus: ITGB4 (human) mapping to 17q25.1; Itgb4 (mouse) mapping to 11 E2.

SOURCE

Integrin β4 (H-101) is a rabbit polyclonal antibody raised against amino acids 28-128 mapping within an extracellular domain of Integrin β4 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 β4 (H-101) is recommended for detection of Integrin β4 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 β4 (H-101) is also recommended for detection of Integrin β4 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Integrin β4 siRNA (h): sc-35678, Integrin β4 siRNA (m): sc-35679, Integrin β4 shRNA Plasmid (h): sc-35678-SH, Integrin β4 shRNA Plasmid (m): sc-35679-SH, Integrin β4 shRNA (h) Lentiviral Particles: sc-35678-V and Integrin β4 shRNA (m) Lentiviral Particles: sc-35679-V.

Molecular Weight of Integrin β4: 205 kDa.

Positive Controls: SW480 cell lysate: sc-2219 or MCF7 whole cell lysate: sc-2206.

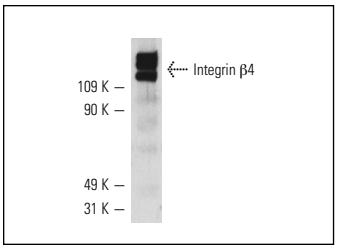
STORAGE

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

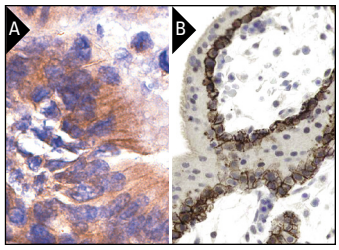
RESEARCH USE

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

DATA



Integrin β4 (H-101): sc-9090. Western blot analysis of Integrin β4 expression in SW480 whole cell lysate.



Integrin β4 (H-101): sc-9090. Immunoperoxidase staining of formalin-fixed, paraffin-embedded human colon tumor showing membrane and cytoplasmic staining (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing membrane staining of trophoblastic cells. Kindly provided by The Swedish Human Protein Atlas (HPA) program (**B**).

SELECT PRODUCT CITATIONS

1. Abdel-Ghany, M., et al. 2001. The breast cancer β4 Integrin and endothelial human CLCA2 mediate lung metastasis. J. Biol. Chem. 276: 25438-25446.
2. Noh, T.W., et al. 2010. Effect of β4 integrin knockdown by RNA interference in anaplastic thyroid carcinoma. Anticancer Res. 30: 4485-4492.
3. Luque-García, J.L., et al. 2010. Differential protein expression on the cell surface of colorectal cancer cells associated to tumor metastasis. Proteomics 10: 940-952.
4. Panacchia, L., et al. 2010. Nonirradiated human fibroblasts and irradiated 3T3-J2 murine fibroblasts as a feeder layer for keratinocyte growth and differentiation in vitro on a fibrin substrate. Cells Tissues Organs 191: 21-35.
5. Liu, C., et al. 2010. Wound repair and anti-oxidative capacity is regulated by ITGB4 in airway epithelial cells. Mol. Cell. Biochem. 341: 259-269.
6. Soung, Y.H., et al. 2011. Curcumin inhibition of the functional interaction between integrin α6β4 and the epidermal growth factor receptor. Mol. Cancer Ther. 10: 883-891.
7. Mizutani, K., et al. 2011. Interaction of nectin-like molecule 2 with integrin α6β4 and inhibition of disassembly of integrin α6β4 from hemidesmosomes. J. Biol. Chem. 286: 36667-36676.
8. Chang, K.C., et al. 2011. Desmoplastic tumour-associated stroma versus neural tissue in central nervous system metastasis: effects of different microenvironments on tumour growth. Histopathology 59: 31-39.