

# Integrin $\beta$ 4 (N-20): sc-6629

## 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. Integrin  $\beta$ 4 (ITGB4), also known as CD104, is a 1,822 amino acid single-pass type I membrane protein belonging to the Integrin  $\beta$  chain family. Known to associate with Integrin  $\alpha$ 6, Integrin  $\beta$ 4 functions as a receptor for Laminin and is predominantly expressed by epithelia. Integrin  $\beta$ 4 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.

## SOURCE

Integrin  $\beta$ 4 (N-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of Integrin  $\beta$ 4 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-6629 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## 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.

## APPLICATIONS

Integrin  $\beta$ 4 (N-20) is recommended for detection of Integrin  $\beta$ 4 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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  $\beta$ 4 (N-20) is also recommended for detection of Integrin  $\beta$ 4 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for Integrin  $\beta$ 4 siRNA (h): sc-35678, Integrin  $\beta$ 4 shRNA Plasmid (h): sc-35678-SH and Integrin  $\beta$ 4 shRNA (h) Lentiviral Particles: sc-35678-V.

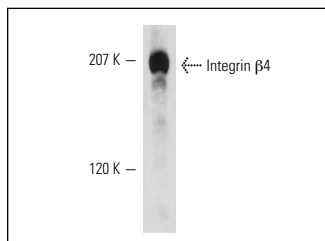
Molecular Weight of Integrin  $\beta$ 4: 205 kDa.

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

## 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

## DATA



Integrin  $\beta$ 4 (N-20): sc-6629. Western blot analysis of Integrin  $\beta$ 4 expression in SW480 whole cell lysate.

## SELECT PRODUCT CITATIONS

- Fujimoto, W., et al. 2000. Linear IgA disease with IgA antibodies directed against 200- and 280-kDa epidermal antigens. *Br. J. Dermatol.* 142: 1213-1218.
- Debruyne, P.R., et al. 2003. Functional and molecular characterization of the epithelioid to round transition in human colorectal cancer LoVo cells. *Oncogene* 22: 7199-7208.
- Lee, O.H., et al. 2006. Expression of the receptor tyrosine kinase Tie2 in neoplastic glial cells is associated with integrin  $\beta$ 1-dependent adhesion to the extracellular matrix. *Mol. Cancer Res.* 4: 915-926.
- Dentelli, P., et al. 2007. Oxidative stress-mediated mesangial cell proliferation requires RAC-1/reactive oxygen species production and  $\beta$ 4 integrin expression. *J. Biol. Chem.* 282: 26101-26110.
- Isaac, J., et al. 2012. Site-specific S-nitrosylation of integrin  $\alpha$ 6 increases the extent of prostate cancer cell migration by enhancing integrin  $\beta$ 1 association and weakening adherence to laminin-1. *Biochemistry* 51: 9689-9697.

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Try **Integrin  $\beta$ 4 (F-7): sc-514252** or **Integrin  $\beta$ 4 (H-1): sc-55514**, our highly recommended monoclonal alternatives to Integrin  $\beta$ 4 (N-20). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Integrin  $\beta$ 4 (F-7): sc-514252**.