

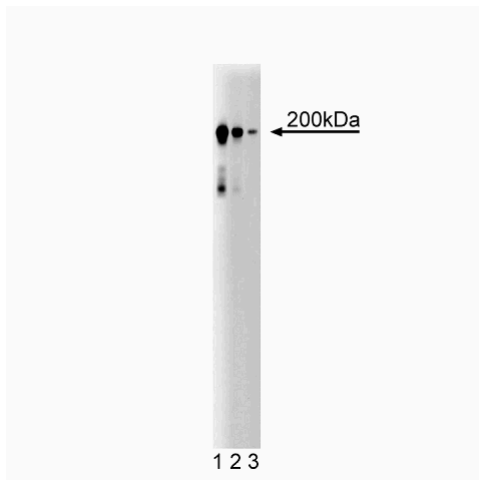
Technical Data Sheet

Purified Mouse Anti-Human CD104**Product Information**

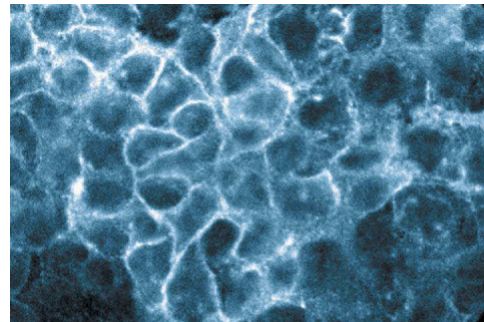
Material Number:	611233
Alternate Name:	Integrin β 4
Size:	150 μ g
Concentration:	250 μ g/ml
Clone:	7/CD104
Immunogen:	Human Integrin β 4 aa. 1612-1821
Isotype:	Mouse IgG1
Reactivity:	QC Testing: Human
Target MW:	200 kDa
Storage Buffer:	Aqueous buffered solution containing BSA, glycerol, and \leq 0.09% sodium azide.

Description

Cell adhesion to extracellular matrix components or to cell surface proteins, especially those expressed by leukocytes and endothelial cells, is mediated by integrins. Integrins contain noncovalently associated α and β subunits. At least 17 α and 8 β subunits have been identified and these proteins can heterodimerize to form 22 different receptors. The $\alpha\beta$ 4 integrin is a receptor for various laminins and binds with the highest affinity to laminins 4 and 5. It exhibits elevated expression in the basal cell layer of stratified epithelia, in Schwann cells at the onset of myelination, and in CD4-CD8- pre-T lymphocytes entering the thymus. In addition, $\alpha\beta$ 4 expression is increased in squamous carcinomas where it promotes invasion through a targeting of PI3 kinase activity. The majority of β 4 comprises a cytoplasmic domain with unique signaling properties. The C-terminal portion of this domain contains two pairs of type III fibronectin-like motifs (FNIII) and a tyrosine activation motif (TAM). Additional domains in the cytoplasmic tail bind Shc and activate the MAPK pathway. Thus, integrin β 4 is an integrin subunit that is important for cell survival, growth, and differentiation.



Western blot analysis of CD104 (Integrin β 4) on a A431 cell lysate (Human epithelial carcinoma; ATCC CRL-1555). Lane 1: 1:250, lane 2: 1:500, lane 3: 1:1000 dilution of the anti-human CD104 antibody.



Immunofluorescence staining of A431 cells (Human epithelial carcinoma; ATCC CRL-1555).

Preparation and Storage

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

Store undiluted at -20° C.

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Application Notes

Application

Western blot	Routinely Tested
Immunofluorescence	Tested During Development

Recommended Assay Procedure:

Western blot: Please refer to http://www.bdbiosciences.com/pharming/en/protocols/Western_Blotting.shtml

Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
611447	A431 Cell Lysate	500 µg	(none)
554002	HRP Goat Anti-Mouse Ig	1.0 ml	(none)
554001	FITC Goat Anti-Mouse Ig	0.5 mg	Polyclonal

Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to www.bdbiosciences.com/pharming/en/protocols for technical protocols.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.

References

Mainiero F, Pepe A, Wary KK, et al. Signal transduction by the alpha 6 beta 4 integrin: distinct beta 4 subunit sites mediate recruitment of Shc/Grb2 and association with the cytoskeleton of hemidesmosomes. *EMBO J.* 1995; 14(18):4470-4481.(Biology)
Shaw LM, Rabinovitz I, Wang HH, Toker A, Mercurio AM. Activation of phosphoinositide 3-OH kinase by the alpha6beta4 integrin promotes carcinoma invasion. *Cell.* 1997; 91(7):949-960.(Biology)