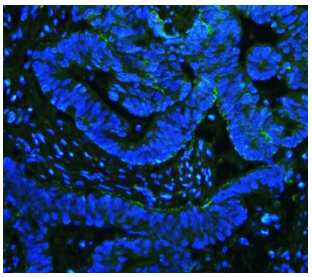
CD104 Antibody / ITGB4 Polyclonal Antibody (RQ5890)

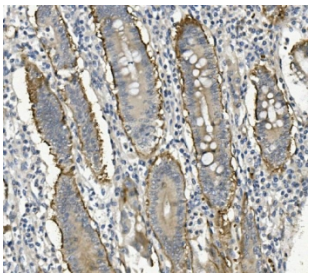
Catalog No.	Formulation	Size
RQ5890	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

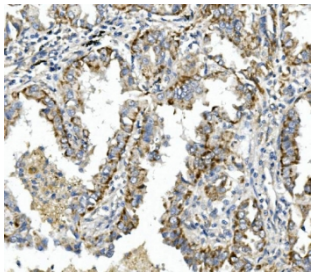
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide
UniProt	P16144
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry: 1-2ug/ml Immunofluorescence: 2-4ug/ml Flow cytometry: 1-3ug/million cells Direct ELISA: 0.1-0.5ug/ml
Limitations	This CD104 Antibody / ITGB4 Polyclonal Antibody is available for research use only.



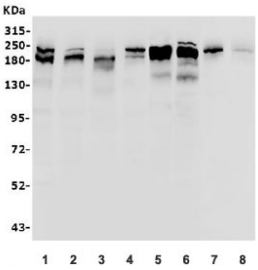
CD104 Antibody in Human Intestinal Cancer IF. Immunofluorescence staining of FFPE human intestinal cancer tissue with CD104 Antibody (green) and DAPI nuclear counterstain (blue). HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. The image shows green ITGB4 signal outlining portions of the epithelial structures, with prominent staining along cell and tissue boundaries surrounding the densely packed blue nuclei. This localization is consistent with the cell-matrix adhesion role of integrin beta 4 and demonstrates tissue detection using the ITGB4 Polyclonal Antibody.



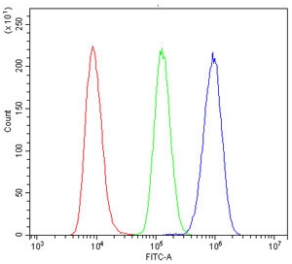
CD104 Antibody in Human Rectal Cancer IHC. Immunohistochemistry staining of FFPE human rectal cancer tissue with CD104 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Strong brown immunoreactivity is concentrated predominantly along the epithelial glandular structures, while much of the surrounding stromal tissue shows comparatively little staining. The distribution highlights ITGB4 expression within the epithelial compartment and demonstrates detection of integrin beta 4 using the ITGB4 Polyclonal Antibody.



CD104 Antibody in Human Lung Cancer IHC. Immunohistochemistry staining of FFPE human lung cancer tissue with CD104 Antibody. HIER was performed by boiling tissue sections in pH 8 EDTA for 20 min followed by cooling before testing. Brown ITGB4 immunoreactivity is visible along the epithelial tumor structures, with prominent peripheral and membranous-associated staining in multiple regions of the section. This pattern is consistent with the epithelial localization of integrin beta 4 and demonstrates tissue detection using the ITGB4 Polyclonal Antibody.



CD104 Antibody Western Blot of Human Cells and Rodent Ovary. Western blot testing of human A549 (lane 1), PC-3 (lane 2), T47-D (lane 3), HeLa (lane 4), SW620 (lane 5), Caco-2 (lane 6), rat ovary (lane 7), and mouse ovary (lane 8) lysates with CD104 Antibody. Predicted molecular weight is approximately 200 kDa. A predominant high-molecular-weight band is detected near 200 kDa across the samples, with differences in signal intensity and migration between lysates. The multi-sample blot demonstrates human, rat, and mouse ITGB4 detection by the ITGB4 Polyclonal Antibody.



CD104 Antibody in Human Raji B Lymphoma Cells FACS. Flow cytometry testing of human Raji B lymphoma cells with CD104 Antibody at 1 ug/million cells following blocking with goat serum. Cells alone are shown in red, isotype control in green, and CD104 antibody staining in blue. The blue population shows a clear rightward shift relative to both the isotype control and untreated cells, demonstrating detection of cell-associated ITGB4 by the ITGB4 Polyclonal Antibody.

Description

CD104 Antibody recognizes integrin beta 4, a transmembrane adhesion receptor subunit encoded by the ITGB4 gene and also known as CD104. Unlike most integrin beta subunits, ITGB4 primarily associates with integrin alpha 6 to form the alpha 6 beta 4 heterodimer. This receptor is particularly important for interactions between epithelial cells and the basement membrane and has structural and signaling functions that distinguish it from many other members of the integrin family.

Integrin beta 4 is a type I transmembrane glycoprotein characterized by an unusually large cytoplasmic domain of more than 1,000 amino acids. This region contains four fibronectin type III domains and multiple interaction sites for cytoskeletal and signaling proteins. The extended intracellular domain enables alpha 6 beta 4 to connect extracellular laminins with intracellular structural components and participate in signaling pathways that regulate cellular behavior.

A major function of alpha 6 beta 4 is the formation and maintenance of hemidesmosomes, specialized adhesion structures that anchor epithelial cells to the underlying basement membrane. Within hemidesmosomes, ITGB4 interacts with proteins including plectin and BP230, helping connect the receptor complex to keratin intermediate filaments. Extracellularly, alpha 6 beta 4 binds laminins, particularly laminin-332, creating a mechanically stable connection between the epithelial cytoskeleton and extracellular matrix.

Beyond its structural role, CD104 participates in signaling associated with cell migration, survival, proliferation, and tissue remodeling. Changes in phosphorylation and protein interactions within the large ITGB4 cytoplasmic domain can alter hemidesmosome organization and promote signaling responses. Altered expression or signaling of alpha 6 beta 4 has consequently been investigated in epithelial tumor progression, invasion, and other processes involving changes in cell-matrix adhesion.

The physiological importance of ITGB4 is also demonstrated by pathogenic variants that disrupt alpha 6 beta 4 function. Defective integrin beta 4 can impair epithelial attachment to basement membranes and is associated with forms of junctional epidermolysis bullosa, including disease accompanied by pyloric atresia. These phenotypes underscore the importance of ITGB4 in maintaining epithelial tissue integrity.

A CD104 Antibody can be used to investigate expression of the beta 4 integrin subunit, while an ITGB4 Polyclonal Antibody provides a reagent for studies of hemidesmosomes, epithelial adhesion, integrin signaling, and alpha 6 beta 4 biology.

For additional antibodies targeting cell-surface CD proteins, see our CD Antibodies page.

Application Notes

Optimal dilution of the CD104 Antibody / ITGB4 Polyclonal Antibody should be determined by the researcher.

Immunogen

Recombinant human protein (amino acids R29-K431) was used as the immunogen for the ITGB4 / CD104 antibody.

Storage

After reconstitution, the ITGB4 / CD104 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

Alternate Names

ITGB4 antibody, Integrin Beta 4 antibody, Beta 4 Integrin antibody, Integrin beta-4 subunit antibody, GP150 antibody, CD104 antigen antibody

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