abcam

ab110167

Anti-Integrin beta 4 antibody [439-9B]

Key facts

Isotype	IgG2b
Host species	Rat
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	439-9B
Purification technique	Affinity purification
Specificity	Recognizes human Integrin beta-4, a 202 kDa subunit that associates with integrin alpha 6 (CD49f), thereby forming the laminin receptor. Multiple splice variants have been identified. It is used as a surface staining antibody.
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	20 µg/mL
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^5-10^8 Cells
Notes	in 100 µl. ab18536 - Rat monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

Target data

See full target information ITGB4

Function	Integrin alpha-6/beta-4 is a receptor for laminin. Plays a critical structural role in the hemidesmosome of epithelial cells. Is required for the regulation of keratinocyte polarity and motility. ITGA6:ITGB4 binds to NRG1 (via EGF domain) and this binding is essential for NRG1-ERBB signaling (PubMed:20682778). ITGA6:ITGB4 binds to IGF1 and this binding is essential for IGF1 signaling (PubMed:22351760). ITGA6:ITGB4 binds to IGF2 and this binding is essential for IGF2 signaling (PubMed:28873464).

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	Integrin beta 4 also known as ITGB4 integrin ß4 or integrine beta 4 is a transmembrane protein that mechanically links the extracellular matrix to the intracellular cytoskeleton. This protein has a molecular mass of approximately 205

	kDa. Integrin beta 4 primarily expresses in epithelial cells particularly those forming stratified and transitional epithelia. It partners with alpha 6 integrin to form the alpha 6 beta 4 integrin complex which plays a significant role in the formation and maintenance of hemidesmosomes.
Biological function summary	Integrin beta 4 is important for anchoring epithelial cells to the basement membrane stabilizing cell layers in tissues. It interacts with intermediate filaments through specific cytoplasmic proteins. The integrin beta 4 complex ensures structural integrity essential for maintaining the skin and mucosal barriers. Integrations with proteins like M126 are essential for strengthening these interactions safeguarding cellular stability and promoting wound healing.
Pathways	Integrin beta 4 is embedded in key signaling pathways that influence cell adhesion and migration. It participates prominently in the PI3K/AKT and RAS pathway collaborations facilitating signal transduction essential for cell growth and survival. Through these pathways integrin beta 4 interacts with proteins like IS200BPIRG1A linking extracellular cues to internal cellular responses.
Associated diseases and disorders	Integrin beta 4 has associations with epidermolysis bullosa and various cancers. In epidermolysis bullosa mutations in integrin beta 4 impair hemidesmosomal function leading to skin fragility. In cancer integrin beta 4 overexpression or mislocalization contributes to tumor progression affecting cell invasion and metastasis. Its interactions with IS200BPIAG1A or related pathways highlight the protein's influence on carcinogenic processes and potential as a therapeutic target.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

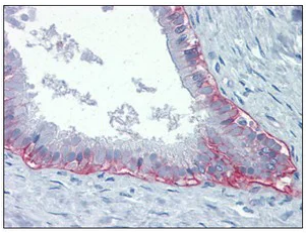
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

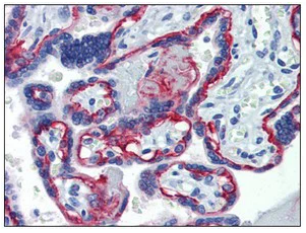
3 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 4 antibody [439-9B] (ab110167)

Integrin beta 4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-Integrin beta 4 antibody

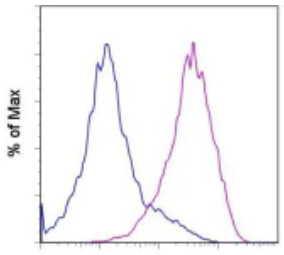
ab110167 at 20 µg/ml staining integrin beta 4 in Formalin-Fixed, Paraffin-Embedded Human Pancreas (ab29816). Sections were incubated with a biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 4 antibody [439-9B] (ab110167)

Integrin beta 4 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rat Anti-Integrin beta 4 antibody

ab110167 at 20 µg/ml staining integrin beta 4 in Formalin-Fixed, Paraffin-Embedded Human Placenta. Sections were incubated with a biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen.



Flow Cytometry - Anti-Integrin beta 4 antibody [439-9B] (ab110167)

Integrin beta 4 Flow Cytometry staining using rat Anti-Integrin beta 4 antibody

Staining of the A549 cell line with 0.5 ug of Rat IgG2b Isotype Control (ab98984) (blue histogram) or 0.5 ug of ab110167 (purple histogram) followed by Biotin Anti-Rat IgG and Sav-PE. Total viable cells were used for analysis.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.