abcam

ab29042

Anti-Integrin beta 4 antibody [M126]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	Preservative: 0.05% Sodium azide Constituents: PBS, 50% Glycerol (glycerin, glycerine), 0.1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	Recombinant Fragment Protein within Human ITGB4. The exact immunogen used to generate this antibody is proprietary information. Database link P16144
Clone number	M126
Purification technique	Affinity purification Protein A
Purification notes	protein A chromatography.

Reactivity data

WB

Tested

Species	Human
Dilution info	1/1000
Notes	In 5% non fat milk, PBS, 0.04% Tween 20 for 1 hour at room temperature.

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100
Notes	ab170190 - Mouse monoclonal IgG1, 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

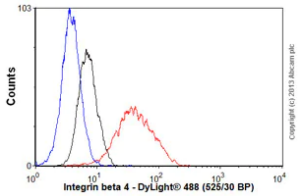
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry (Intracellular) - Anti-Integrin beta 4 antibody [M126] (ab29042)

Integrin beta 4 Flow Cytometry (Intracellular) staining using mouse Anti-Integrin beta 4 antibody

Overlay histogram showing A431 cells stained with ab29042 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum (ab7481) / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab29042, 1/100 dilution) for 30 min at 22°C. The secondary antibody used was a goat anti-mouse DyLight® 488 (IgG; H+L) (ab96879) at 1/500 dilution for 30 min at 22°C. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (ab91353, 1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5,000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.

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