abcam

ab216310

PE Anti-Integrin beta 4 antibody [346-11A]

Anti-Integrin beta 4 antibody [346-11A] conjugated to PE - suitable for flow cytometry, and reacts with mouse samples. Clone [346-11A] is a rat monoclonal antibody cited in 23 publications.

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Key facts

Isotype	IgG2a
Host species	Rat
Conjugation	PE
Excitation/Emission	Ex: 480;565nm, Em: 578nm
Storage buffer	pH: 7.2 Preservative: 0.09% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Clone number	346-11A
Purification technique	Affinity purification Protein A
Light chain type	kappa
Concentration	0.2 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab216310 was conjugated with Phycoerythrin under optimal conditions. The solution is free of unconjugated Phycoerythrin and unconjugated antibody.

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	0.25 µg for 10^6 Cells
Notes	(in 100 µl volume).

Target data

See full target information Integrin beta-4

Function	Integrin alpha-6/beta-4 is a receptor for laminin. It 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. ITGA6:ITGB4 binds to IGF1 and this binding is essential for IGF1 signaling. ITGA6:ITGB4 binds to IGF2 and this binding is essential for IGF2 signaling.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Store in the dark

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

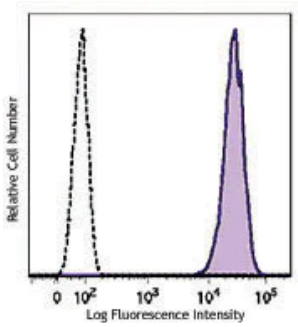
We do not recommend this combination. It is not covered by our product promise.

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1 product image



Flow Cytometry - PE Anti-Integrin beta 4 antibody [346-11A] (ab216310)

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

Flow cytometric analysis of mouse lung carcinoma cell line labeling Integrin beta 4 with ab216310 at 0.25 µg for 10^6 cells (filled histogram). A rat IgG2a, κ PE conjugate was used as isotype control (open histogram).

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