abcam

ab20142

Anti-Integrin alpha 6 antibody [MP 4F10]

Key facts

Isotype	IgG2b
Host species	Mouse
Storage buffer	Preservative: 0.02% Sodium azide Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	Cell preparation containing Integrin alpha 6 protein. The exact immunogen used to generate this antibody is proprietary information.
Clone number	MP 4F10
Purification technique	Affinity purification Protein A
Light chain type	unknown
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	1 µg for 10^6 Cells

Notes	(paraformaldehyde or methanol fixed cells) ab170192 - Mouse monoclonal IgG2b, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	1 µg/mL
Notes	-

Target data

See full target information ITGA6

Function	Integrin alpha-6/beta-1 (ITGA6:ITGB1) is a receptor for laminin on platelets (By similarity). Integrin alpha-6/beta-1 (ITGA6:ITGB1) is present in oocytes and is involved in sperm-egg fusion (By similarity). Integrin alpha-6/beta-4 (ITGA6:ITGB4) is a receptor for laminin in epithelial cells and it plays a critical structural role in the hemidesmosome (By similarity). 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 alpha 6 also known as ITGA6 or CD49f functions as a transmembrane receptor protein involved in cell adhesion and signal transduction. As part of the broader integrin family integrin alpha 6 typically pairs with the beta 1 or beta 4 subunits forming the alpha6beta1 or alpha6beta4 integrins respectively. It has a molecular mass of approximately 150 kDa. This protein is mainly expressed in epithelial cells but also found in platelets certain immune cells and in the nervous system. Its expression patterns highlight its role in a variety of cellular and tissue functions.
Biological function summary	The integrin alpha 6 protein partners with the beta 4 subunit to form a heterodimer complex that plays an important role in cellular adhesion to the extracellular matrix specifically interacting with laminins. Its main action helps cells attach to the basement membrane which is an important component of epithelial tissue structure and integrity. The alpha 6 integrin provides structural cell support and participates in transmitting signals that influence cell behavior such as movement survival and proliferation.
Pathways	Integrins including the alpha 6 variant are important components in the integrin signaling pathway and are involved in cell motility and survival pathways. In particular the alpha 6 integrin partners with proteins like focal adhesion kinase (FAK) and phosphoinositide 3-kinase (PI3K) to initiate downstream signaling cascades. The interaction with laminins activates pathways critical for developmental processes and tissue remodeling highlighting their role in maintaining cellular environments.
Associated diseases and disorders	Integrin alpha 6 has significant implications in cancer progression and skin blistering disorders. In various cancers such as breast and skin cancers upregulation of integrin alpha 6 promotes tumor growth and metastasis through interaction with proteins like collagen and laminins found in the tumor microenvironment. Furthermore in the context of blistering disorders such as epidermolysis bullosa mutations in the beta 4 subunit that pairs with alpha 6 can disrupt the integrity of epithelial tissues leading to severe impact on the skin’s structural stability.

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.

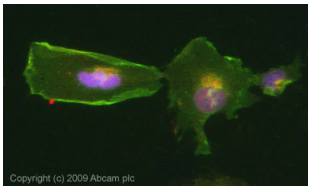
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In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
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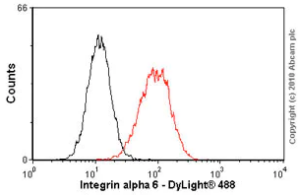
2 product images



Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 6 antibody [MP 4F10] (ab20142)

Integrin alpha 6 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Integrin alpha 6 antibody

ICC/IF image of ab20142 stained HeLa cells (ab150035). The cells were 4% PFA fixed (10 min) and then incubated in 1%BSA / 10% normal Goat serum / 0.3M (ab7481) glycine (ab120050) in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab20142, 1µg/ml) overnight at +4°C. The secondary antibody (green) was Alexa Fluor® 488 Goat anti-Mouse IgG (H+L) ab150113) used at a 1/1000 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.



Flow Cytometry - Anti-Integrin alpha 6 antibody [MP 4F10] (ab20142)

Integrin alpha 6 Flow Cytometry staining using mouse Anti-Integrin alpha 6 antibody

Overlay histogram showing HT1080 cells stained with ab20142 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab20142, 1µg/1x10^6 cells) 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 IgG2b [PLPV219] (ab91366, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in HT1080 cells fixed with methanol (5 min) used under the same conditions.

Please note that Abcam does not have data for use of this antibody on non-fixed cells. We welcome any customer feedback.

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