abcam

ab30483

Anti-Integrin alpha 2+beta 1 antibody [16B4]

Key facts

Isotype	IgG1
Host species	Mouse
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 6.97% L-Arginine
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	16B4
Purification technique	Affinity purification
Concentration	1 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	ab30483 was purified from tissue culture supernatant

Reactivity data

Flow Cyt

Tested

Species	Human
Dilution info	0.1 µg for 10^6 Cells
Notes	ab170190 - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	5-10 µg/mL
Notes	-

Target data

See full target information ITGA2

Function Integrin alpha-2/beta-1 is a receptor for laminin, collagen, collagen C-propeptides, fibronectin and E-cadherin. It recognizes the proline-hydroxylated sequence G-F-P-G-E-R in collagen. It is responsible for adhesion of platelets and other cells to collagens, modulation of collagen and collagenase gene expression, force generation and organization of newly synthesized extracellular matrix. (Microbial infection) Integrin ITGA2:ITGB1 acts as a receptor for Human rotavirus A. (Microbial infection) Integrin ITGA2:ITGB1 acts as a receptor for Human echoviruses 1 and 8.

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

Notes

Want a custom formulation?
This antibody clone is manufactured by Abcam. If you require a custom buffer formulation or conjugation for your experiments, please contact orders@abcam.com

Supplementary info

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

Activity summary	Integrin alpha 2+beta 1 also known as integrin a2b1 or alpha 2 beta 1 integrin is a heterodimeric cell surface receptor with a mass of approximately 150 kDa. It is expressed on a variety of cells including epithelial and endothelial cells as well as platelets. The primary role of integrin alpha 2+beta 1 involves mediating cell adhesion to collagen a major component of the extracellular matrix. This interaction is critical for maintaining tissue architecture and integrity. The receptor's structure allows it to bind to specific ligands facilitating cell communication and signal transduction across the cell membrane.
Biological function summary	Integrin alpha 2+beta 1 contributes to processes such as cell migration proliferation and differentiation. This integrin functions as part of a larger integrin family complex which includes related integrins like alpha 1 beta 1 and alpha 6 beta 4. These integrins share similarities in structure and function but have distinct binding specificities and tissue distributions. The presence of integrin alpha 2+beta 1 in various tissues indicates its role in tissue-specific cellular activities underlying its contribution to diverse biological functions.
Pathways	Integrin alpha 2+beta 1 is involved in the MAPK/ERK and PI3K/AKT signaling pathways. These pathways are essential for transmitting signals from the extracellular environment to the cell nucleus influencing gene expression and cellular responses. The integrin interacts with proteins such as focal adhesion kinase (FAK) and Src family kinases which are important for initiating downstream signaling events. The interaction of integrin alpha 2+beta 1 within these pathways highlights its role in regulating cellular responses to environmental changes and stresses.
Associated diseases and disorders	Integrin alpha 2+beta 1 has been linked to cancer metastasis and fibrosis. Its role in promoting cell adhesion and migration is critical in the progression of these diseases. In cancer integrin alpha 2+beta 1 supports tumor cell invasion through the basement membrane by interacting with proteins like matrix metalloproteinases. Fibrosis involves excessive tissue scarring where the integrin contributes to the proliferation of myofibroblasts and deposition of extracellular matrix. Understanding the involvement of integrin alpha 2+beta 1 in these conditions could lead to potential therapeutic targets for intervention.

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.

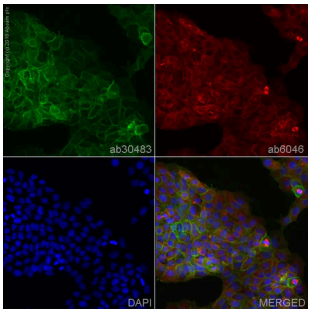
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

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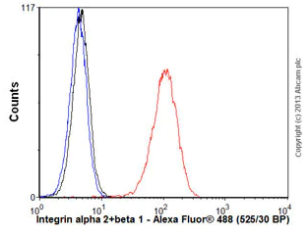
3 product images



Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 2+beta 1 antibody [16B4] (ab30483)

Integrin alpha 2+beta 1 Immunocytochemistry/ Immunofluorescence staining using mouse Anti-Integrin alpha 2+beta 1 antibody

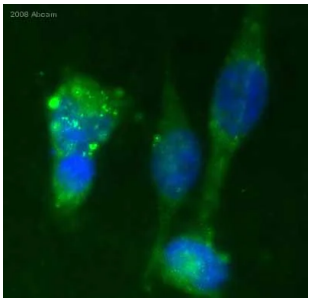
ab30483 stained in A431cells. The cells were fixed with 4% paraformaldehyde (10min) at room temperature and incubated with PBS containing 10% goat serum, 0.3 M glycine, 1% BSA and 0.1% tween for 1 hour at room temperature to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with ab30483 at 5 µg/ml and ab6046 (Rabbit polyclonal to beta tubulin) at 1 ug/ml overnight at +4°C. The secondary antibodies were ab150117 (colored green) used at 1 ug/ml and ab150087 (pseudo-colored red) used at 2 µg/ml for 1 hour at room temperature. DAPI was used to stain the cell nuclei (colored blue) at a concentration of 1.43 µM for 1 hour at room temperature.



Flow Cytometry - Anti-Integrin alpha 2+beta 1 antibody [16B4] (ab30483)

Integrin alpha 2+beta 1 Flow Cytometry staining using mouse Anti-Integrin alpha 2+beta 1 antibody

Overlay histogram showing HT1080 cells stained with ab30483 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab30483, 0.1µg/1x10^6 cells) for 30 min at 22°C. The secondary antibody used was a goat anti-mouse Alexa Fluor® 488 (IgG; H+L) (ab150113) at 1/2000 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. This antibody gave a positive signal in HT1080 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.



This image is courtesy of a customer review submitted by Dr Sharon Sneddon

Immunocytochemistry/ Immunofluorescence - Anti-Integrin alpha 2+beta 1 antibody [16B4] (ab30483)

ab30483 staining human breast cancer cells by ICC/IF. Cells were PFA fixed and blocked with 1% serum for 16 hours at 20°C prior to incubating with ab30483 (at 30µg/ml) for 16 hours at 4°C. An Alexa Fluor® 488 conjugated goat anti-mouse antibody, diluted 1/200, was used as the secondary.

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