abcam

ab131055

Anti-Integrin alpha 3 antibody

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	Constituents: 76.92% Trehalose, 17.31% Sodium chloride, 3.85% Disodium hydrogenorthophosphate
Form	Liquid
Clonality	Polyclonal
Immunogen	Synthetic Peptide within Human ITGA3 aa 50-100. The exact immunogen used to generate this antibody is proprietary information. Database link P26006
Purification technique	Affinity purification Immunogen
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	2-5 µg/mL
Notes	Perform heat-mediated antigen retrieval before commencing with IHC staining protocol.

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

WB

Tested

Species	Rat
Dilution info	0.1-0.5 µg/mL
Notes	-

Species	Human
Dilution info	0.1-0.5 µg/mL
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	5 µg/mL
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Mouse
Dilution info	-
Notes	-

Target data

See full target information ITGA3

Function	Integrin alpha-3/beta-1 is a receptor for fibronectin, laminin, collagen, epiligrin, thrombospondin and CSPG4. Integrin alpha-3/beta-1 provides a docking site for FAP (seprase) at invadopodia plasma membranes in a collagen-dependent manner and hence may participate in the adhesion, formation of invadopodia and matrix degradation processes, promoting cell invasion. Alpha-3/beta-1 may mediate with LGALS3 the stimulation by CSPG4 of endothelial cells migration. (Microbial infection) Integrin ITGA3:ITGB1 may act as a receptor for R.delemar CotH7 in alveolar epithelial cells, which may be an early step in pulmonary mucormycosis disease progression.

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

Supplementary info

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

Activity summary	Integrin alpha 3 also known as ITGA3 or alpha 3 is a protein that plays an important role in cell adhesion and signaling. It forms complexes with other integrins to mediate interactions between cells and the extracellular matrix. Integrin alpha 3 is a type I transmembrane protein with a molecular weight of approximately 120 kDa. This protein is primarily expressed in epithelial tissues including the skin kidneys and respiratory tract.
Biological function summary	Integrin alpha 3 functions as a cell surface receptor that helps regulate cell migration proliferation and differentiation. It is a part of the alpha-3-beta-1 integrin complex which interacts with extracellular proteins like laminin-5 and collagen. This interaction facilitates the transmission of signals from the outside to the inside of the cell affecting various cellular responses and activities.
Pathways	Integrin alpha 3 plays a significant role in the cell signaling and communication pathways. It is involved in the pathways like focal adhesion and MAPK signaling. In these pathways integrin alpha 3 interacts with other proteins such as paxillin and FAK (focal adhesion kinase) which are critical for the downstream signaling that regulates cell shape and movement.
Associated diseases and disorders	Integrin alpha 3 is linked to conditions like skin blistering diseases and cancers particularly those affecting the epithelial tissues. Alterations in integrin alpha 3

expression or function can disturb cell adhesion leading to diseases like epidermolysis bullosa. Additionally in cancer integrin alpha 3 often collaborates with proteins like MMP-9 to promote tumor invasion and metastasis.

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

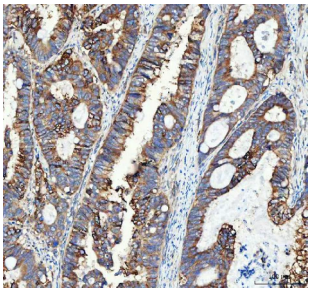
We do not recommend this combination. It is not covered by our product promise.

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.

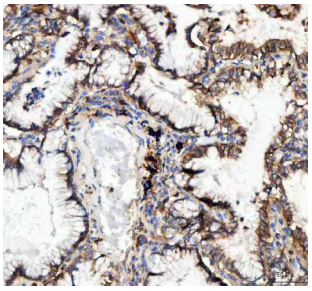
4 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 3 antibody (ab131055)

Integrin alpha 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Integrin alpha 3 antibody

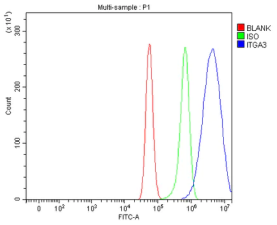
ITGA3 was detected in a paraffin-embedded section of human colorectal adenocarcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml ab131055 overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit with DAB as the chromogen.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin alpha 3 antibody (ab131055)

Integrin alpha 3 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Integrin alpha 3 antibody

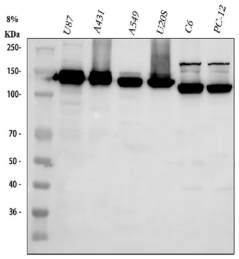
ITGA3 was detected in a paraffin-embedded section of human lung cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml ab131055 overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit with DAB as the chromogen.



Flow Cytometry - Anti-Integrin alpha 3 antibody (ab131055)

Integrin alpha 3 Flow Cytometry staining using rabbit Anti-Integrin alpha 3 antibody

Flow Cytometry analysis of U87 cells using ab131055 (Blue). The cells were fixed with 4% paraformaldehyde and blocked with 10% normal goat serum. And then incubated with ab131055 1 µg/1x10^6 cells for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG 5-10 µg/1x10^6 cells was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green) was rabbit IgG at 1 µg/1x10^6 used under the same conditions. Unlabelled sample (Red) was also used as a control.



Western blot - Anti-Integrin alpha 3 antibody (ab131055)

Integrin alpha 3 Western blot staining using rabbit Anti-Integrin alpha 3 antibody

Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with ab131055at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1/5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for ITGA3 at approximately 130 kDa. The expected band size for ITGA3 is at 117 kDa.
All lanes:
Western blot - Anti-Integrin alpha 3 antibody (ab131055) at 0.5 µg/mL

Lane 1:
human U87 whole cell lysates at 30 µg

Lane 2:
human A431 whole cell lysates at 30 µg

Lane 3:
human A549 whole cell lysates at 30 µg

Lane 4:
human U2OS whole cell lysates at 30 µg

Lane 5:
rat C6 whole cell lysates at 30 µg

Lane 6:
rat PC-12 whole cell lysates at 30 µg

Secondary

All lanes:
goat anti-rabbit IgG-HRP at 1/5000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

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