abcam

ab309092

Anti-Integrin beta 5 antibody [EPR26930-21]

Recombinant | RabMAb | KO Validated | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Preservative: 0.01% Sodium azide Constituents: PBS, 40% Glycerol (glycerin, glycerine), 0.05% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26930-21
Purification technique	Affinity purification Protein A
Concentration	0.516 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Dot

Tested

Species	Recombinant fragment - Human
Dilution info	1/1000
Notes	-

Expected

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

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/500
Notes	-

Species	Mouse
Dilution info	1/500

Notes	-

Species	Rat
Dilution info	1/500
Notes	-

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

Flow Cyt

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

Not recommended

Species	Recombinant fragment - Human
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Human, Mouse, Rat, Recombinant fragment - Human
Dilution info	-
Notes	-

Target data

See full target information Integrin beta-5

Function	Integrin alpha-V/beta-5 (ITGAV:ITGB5) is a receptor for fibronectin. It recognizes the sequence R-G-D in its ligand. (Microbial infection) Integrin ITGAV:ITGB5 acts as a receptor for adenovirus type C.

Storage

Shipped at conditions	Conditional Ambient
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

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

Supplementary info

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

Activity summary	Integrin beta 5 also known as integrin ß5 is a protein that plays an important role in cell adhesion and signal transduction. It is a component of the integrin family known to mediate interactions between cells and the extracellular matrix (ECM). This protein with a molecular mass of around 90 kDa is expressed in various tissues predominantly in epithelial cells. Integrin beta 5 partners with the alpha V subunit to form the alpha V beta 5 integrin complex which facilitates specific ligand binding such as to vitronectin.
Biological function summary	Integrin beta 5 contributes to processes like cell migration proliferation and survival often occurring at cell surfaces. It is a part of the integrin complex which plays an important role in these cellular behaviors. Through its interaction with ECM proteins integrin beta 5 influences key biological activities and assists in maintaining tissue architecture. The activity of this integrin impacts how cells

	respond to their microenvironment influencing cellular fate decisions that are vital to growth and repair mechanisms.
Pathways	Several signaling pathways involve integrin beta 5. It actively participates in the MAPK/ERK and PI3K/AKT pathways which are essential for transmitting signals that promote cell proliferation and survival. Additionally this integrin works closely with other proteins such as focal adhesion kinase (FAK) and Src family kinases integrating signals that modulate cellular responses to mechanical and biochemical cues from the ECM.
Associated diseases and disorders	Integrin beta 5 shows involvement in cancer pathogenesis and fibrotic diseases. In cancer its expression correlates with processes such as tumor cell invasion and metastasis impacting prognosis in various cancers including lung and breast cancer. The protein is related to other integrins and ECM components like integrin alpha V and fibronectin contributing to tumor progression. Additionally in fibrotic diseases the dysregulation of integrin beta 5 influences the remodeling of the ECM linking to proteins such as transforming growth factor-beta (TGF-beta) to facilitate pathological tissue changes.

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

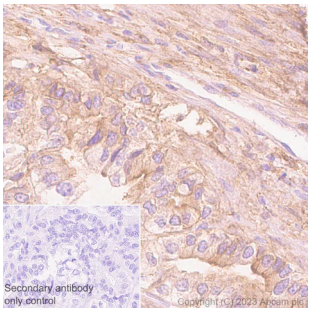
We do not recommend this combination. It is not covered by our product promise.

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.

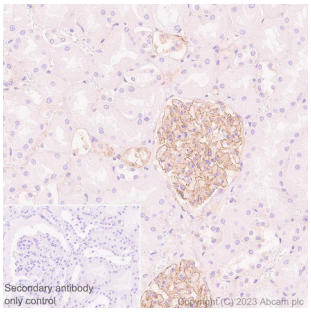
Full details and terms and conditions can be found here:
Terms & Conditions.

10 product images



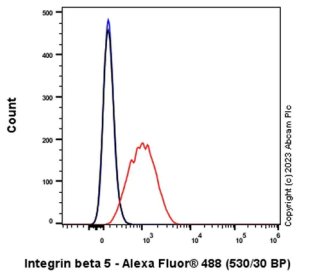
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Immunohistochemical analysis of paraffin-embedded Human gastric adenoc tissue labeling Integrin beta 5 with ab309092 at 1/500 (1.048 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Positive staining on human gastric adenocarcinoma (PMID: 32395495). The section was incubated with ab309092 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



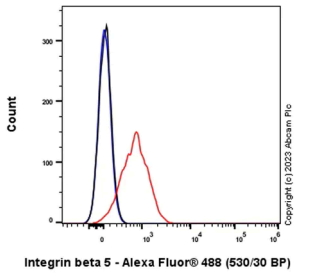
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling Integrin beta 5 with ab309092 at 1/500 (1.048 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Positive staining on human kidney (PMID: 25551756). The section was incubated with ab309092 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



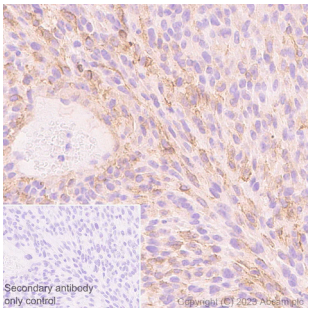
Flow Cytometry - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Flow cytometric analysis of A549 (human lung carcinoma epithelial cell) cells labelling Integrin beta 5 with ab309092 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Gated on viable cells.



Flow Cytometry - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

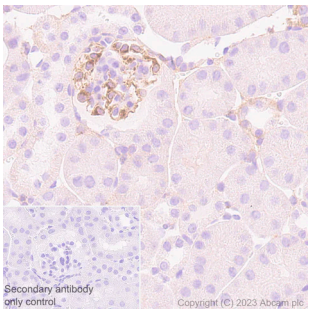
Flow cytometric analysis of NIH/3T3 (mouse embryonic fibroblast) cells labelling Integrin beta 5 with ab309092 at 1/50 dilution (1 ug)/Red compared with a Rabbit monoclonal IgG (ab172730) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/5000 dilution was used as the secondary antibody. Gated on viable cells.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

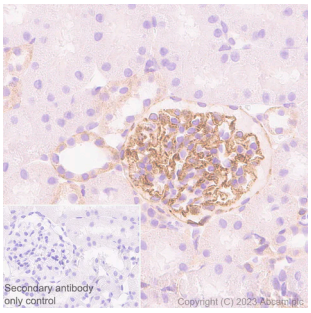
Immunohistochemical analysis of paraffin-embedded Mouse glioblastoma tissue labeling Integrin beta 5 with ab309092 at 1/500 (1.048 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Positive staining on mouse glioblastoma. The section was incubated with ab309092 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC

polymer detection kit HRP/Dab (ab209101). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



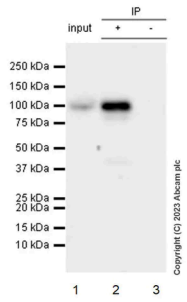
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Integrin beta 5 with ab309092 at 1/500 (1.048 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Positive staining on mouse kidney. The section was incubated with ab309092 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling Integrin beta 5 with ab309092 at 1/500 (1.048 ug/ml) followed by a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Positive staining on rat kidney. The section was incubated with ab309092 for 30 mins at room temperature.The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin. Secondary antibody only control: Secondary antibody is a ready to use Rabbit specific IHC polymer detection kit HRP/Dab (ab209101). Heat mediated antigen retrieval was performed with Tris-EDTA buffer (pH 9.0, Epitope Retrieval Solution2) for 20 mins.



Immunoprecipitation - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Integrin beta 5 was immunoprecipitated from 0.35 mg NIH/3T3 (mouse embryonic fibroblast) whole cell lysate with ab309092 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab309092 at 1/1000 dilution. VeriBlot for IP secondary antibody (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: NIH/3T3 (mouse embryonic fibroblast) whole cell lysate 10 ug
Lane 2: ab309092 IP in NIH/3T3 (mouse embryonic fibroblast) whole cell lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab309092 in NIH/3T3 whole cell lysate

Blocking and dilution buffer and concentration: 5% NFDM/TBST.

All lanes:
Immunoprecipitation - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092) at 1/1000 dilution

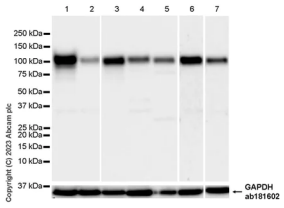
All lanes:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate

Secondary

All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Observed band size: 100 kDa

Exposure time: 32s



Western blot - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Blocking and diluting buffer and concentration: 5% NFDM/TBST In Western blot, anti-GAPDH antibody (ab181602) loading control staining at 1/200000 dilution. Exposure time: Lane 1 and 2: 15 seconds, Lane 3-5: 10 seconds, Lane 6 and 7: 103 seconds.
All lanes:
Western blot - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092) at 1/1000 dilution

Lane 1:
A549 (human lu carcinoma epithelial cell) transfected with scrambled siRNA control whole cell lysate at 20 µg

Lane 2:
A549 transfected with siRNA specifically targeti ITGB5 whole cell lysate at 20 µg

Lane 3:
NCI-H1299 (human lung carcinoma epithelial cell) whole cell lysate at 20 µg

Lane 4:
NIH/3T3 (mouse embryonic fibroblast) whole cell lysate at 20 µg

Lane 5:
Mouse lung tissue lysate at 20 µg

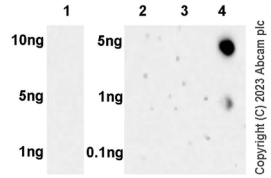
Lane 6:
Mouse liver tissue lysate at 20 µg

Lane 7:
Rat liver tissue lysate at 20 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG (HRP) with minimal cross-reactivity with human IgG at 1/2000 dilution

Observed band size: 100 kDa



Dot Blot - Anti-Integrin beta 5 antibody [EPR26930-21] (ab309092)

Dot blot analysis of Integrin beta 5 using ab309092 at 1:1000 (0.524 ug/ml) followed by a Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1:100000 dilution. Exposure time: 180 seconds Blocking and diluting buffer and concentration: 5% NFDM/TBST

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