abcam

ab275746

Anti-COL18A1 antibody [EPR23481-21]

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	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	EPR23481-21
Purification technique	Affinity purification Protein A
Specificity	This antibody does not recognise the Endostatin chain. This antibody (ab275746 [EPR23481-21] is a distinct clone from ab275390 [EPR23481-240].
Concentration	0.523 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	1/50

Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

IHC-P

Tested

Species	Human
Dilution info	1/4000
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Not recommended

Species	Mouse
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Species	Rat
Dilution info	-
Notes	Perform heat-mediated antigen retrieval with Tris/EDTA buffer pH 9.0 before commencing with IHC staining protocol.

Target data

See full target information COL18A1

Function	Probably plays a major role in determining the retinal structure as well as in the closure of the neural tube. Non-collagenous domain 1. May regulate extracellular matrix-dependent motility and morphogenesis of endothelial and non-endothelial cells; the function requires homotrimerization and implicates MAPK signaling. Endostatin. Potently inhibits endothelial cell proliferation and angiogenesis (PubMed:9459295). May inhibit angiogenesis by binding to the heparan sulfate proteoglycans involved in growth factor signaling (By similarity). Inhibits VEGFA-induced endothelial cell proliferation and migration. Seems to inhibit VEGFA-mediated signaling by blocking the interaction of VEGFA to its receptor KDR/VEGFR2. Modulates endothelial cell migration in an integrin-dependent manner implicating integrin ITGA5:ITGB1 and to a lesser extent ITGAV:ITGB3 and ITGAV:ITGB5 (By similarity). May negatively regulate the activity of homotrimeric non-collagenous domain 1 (PubMed:11257123).

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.

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.

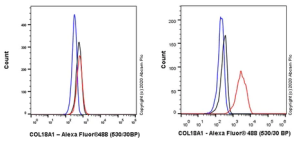
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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6 product images

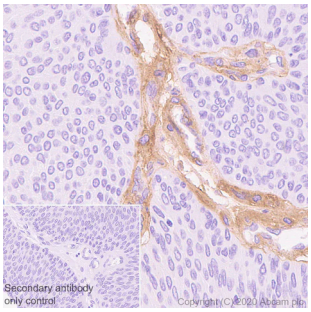


Flow Cytometry (Intracellular) - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

COL18A1 Flow Cytometry (Intracellular) staining using rabbit Anti-COL18A1 antibody

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol-permeabilized U-937 (Human histiocytic lymphoma monocyte, Left) / HepG2 (Human hepatocellular carcinoma epithelial cell, Right) cells labelling COL18A1 with ab275746 at 1/500 dilution (0.1ug) (Red) compared with a Rabbit monoclonal IgG (ab172730) isotype control (Black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue).
A Goat anti-rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.

Negative control: U937 cell (PMID: 15451191).

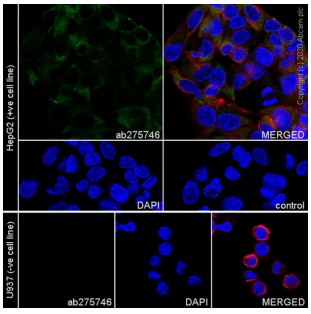


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

COL18A1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-COL18A1 antibody

Immunohistochemical analysis of paraffin-embedded Human bladder cancer tissue labeling COL18A1 with ab275746 at 1/4000 (0.134 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on blood vessels of human bladder cancer (PMID:21815140). The section was incubated with ab275746 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).

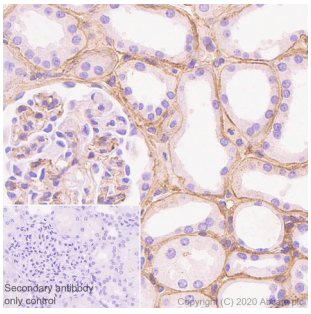
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

COL18A1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-COL18A1 antibody

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized HepG2 cells labelling COL18A1 with ab275746 at 1/50 (8.26 ug/ml) dilution, followed by ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) antibody at 1/1000 dilution (Green). Confocal image showing cytoplasmic staining in HepG2 cells. **Negative control:** U937 cell (PMID: 15451191). ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5 dilution (Red). The Nuclear counterstain was DAPI (Blue).
Secondary antibody only control: Secondary antibody is ab150077 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution.

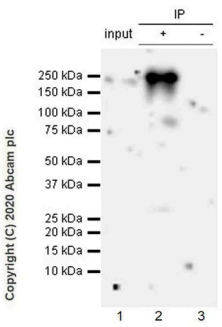


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

COL18A1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-COL18A1 antibody

Immunohistochemical analysis of paraffin-embedded Human kidney tissue labeling COL18A1 with ab275746 at 1/4000 (0.134 ug/ml) dilution followed by a ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Positive staining on human kidney (PMID: 12588956). The section was incubated with ab275746 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 with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunoprecipitation - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

COL18A1 was immunoprecipitated from 0.35 mg Huh7 (human hepatocellular carcinoma epithelial cell), whole cell lysate with ab275746 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab275746 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: Huh7 (human hepatocellular carcinoma epithelial cell), whole cell lysate 10 ug

Lane 2: ab275746 IP in Huh7 whole cell lysate

Lane 3: Rabbit monoclonal IgG (ab172730) instead of 275746 in Huh7 whole cell lysate

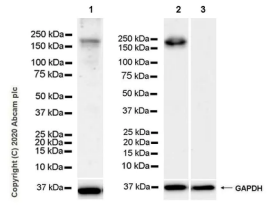
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 minutes.

All lanes:
Immunoprecipitation - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

Predicted band size: 178 kDa

Observed band size: 178 kDa



Western blot - Anti-COL18A1 antibody [EPR23481-21] (ab275746)

Blocking and diluting buffer and concentration: 5% NFDM/TBST.
The expression profile observed is consistent with what has been described in the literature (PMID: 11581192, 15451191).

Negative control: U937 (PMID:15451191).

The lanes 1 of blot were developed using a higher sensitivity ECL substrate.

Exposure time: Lane 1: 3 minutes Lane 2-3: 70 seconds.

All lanes:
Western blot - Anti-COL18A1 antibody [EPR23481-21] (ab275746) at 1/1000 dilution

Lane 1:
HepG2 (human hepatocellular carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
Huh7 (human hepatocellar carcinoma epithelial cell), whole cell lysate at 40 µg

Lane 3:
U937 (human histiocytic lymphoma monocyte), whole cell lysate at 40 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) at 1/100000 dilution

Predicted band size: 178 kDa

Observed band size: 178 kDa

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