abcam

ab283694

Anti-Pro-Collagen III alpha 1 antibody [RM1028]

Recombinant | RabMAb | 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	Multiclonal
Immunogens	The exact immunogen used to generate this antibody is proprietary information.
Clone number	RM1028
Purification technique	Affinity purification Protein A
Concentration	0.639 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Not recommended

Species	Human, Rat, Mouse
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/500
Notes	-

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Expected

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

IHC-P

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000

Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

IHC-Fr

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Expected

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

Target data

See full target information Collagen alpha-1(III) chain

Function	Collagen type III occurs in most soft connective tissues along with type I collagen. Involved in regulation of cortical development. Is the major ligand of ADGRG1 in the developing brain and binding to ADGRG1 inhibits neuronal migration and activates the RhoA pathway by coupling ADGRG1 to GNA13 and possibly GNA12.

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

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.

Supplementary info

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

Activity summary	Pro-Collagen III alpha 1 also known as collagen III is a precursor to type III collagen. It has a molecular mass of approximately 139 kDa. This protein predominantly occurs in tissues like skin lung intestine and the vascular system where it plays a mechanical role by contributing to the structural integrity and mechanical properties of these organs. The synthesize beings in the fibroblasts and procollagen undergoes a series of post-translational modifications before it secreted into the extracellular matrix.
Biological function summary	This precursor form of collagen functions as part of the collagen formation process. As a component of the extracellular matrix it interacts with various components like glycosaminoglycans and elastin helping maintain elasticity and strength. Pro-collagen III is not a part of oligomeric complexes but rather after processing joins the fibrillar collagens to support tissue structure and repair.
Pathways	Pro-Collagen III alpha 1 plays a role in the processes of collagen biosynthesis and fibroblast growth signaling. It participates in the extracellular matrix organization pathway where it influences cellular adhesion migration and differentiation. This protein is related to other proteins such as collagen I and fibronectin through these pathways highlighting its importance in tissue integrity and wound healing.
Associated diseases and disorders	The overproduction or dysfunction of Pro-Collagen III alpha 1 or its matured form collagen III often relates to fibrotic diseases and vascular conditions like Ehlers-Danlos syndrome. It interacts with collagen I in these scenarios which together can impact the phenotype of affected tissues leading to abnormalities in skin elasticity and cardiovascular complications. Understanding its role in these diseases helps in targeted therapies and potential treatment strategies.

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.

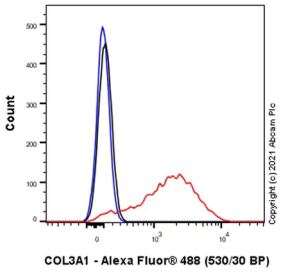
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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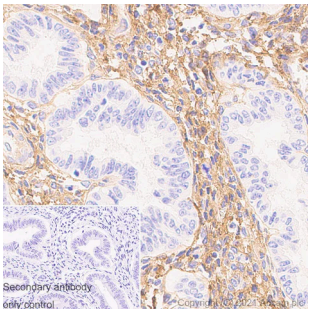
8 product images



Flow Cytometry (Intracellular) - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized HeLa cells (Human cervix adenocarcinoma epithelial cell) labelling COL3A1 with ab283694 at 1/500 dilution (0.1ug) (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). A Goat anti-Rabbit IgG (Alexa Fluor® 488, ab150077) at 1/2000 dilution was used as the secondary antibody.



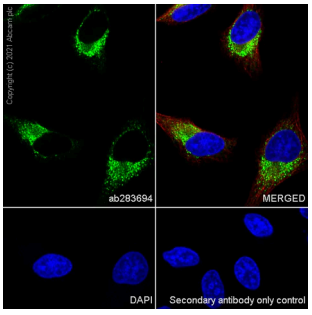
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of paraffin-embedded Human endometrium tissue labelling COL3A1 with ab283694 at 1/1000 (0.629 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on the stroma in the human endometrium. The section was incubated with ab283694 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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

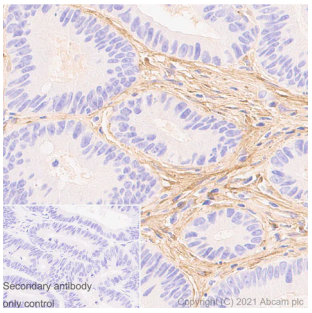
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Immunocytochemistry/ Immunofluorescence - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunofluorescent analysis of 100% methanol-fixed, 0.1% TritonX-100 permeabilized HeLa cells labelling COL3A1 with ab283694 at 1/100 (6.29 ug/ml) dilution, followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed antibody at 1/1000 2 ug/ml dilution (Green). Confocal image showing cytoplasmic staining in HeLa cell line is observed. ab195889 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue). Secondary antibody only control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 2 ug/ml dilution.



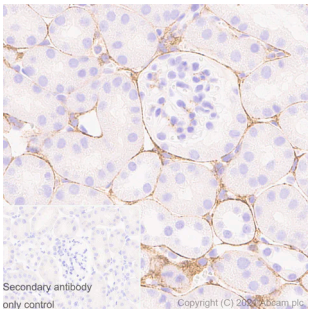
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of paraffin-embedded Human colon carcinoma tissue labelling COL3A1 with ab283694 at 1/1000 (0.629 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on the stroma in the human colon carcinoma. The section was incubated with ab283694 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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

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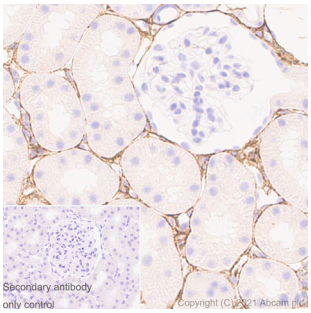
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Pro-Collagen III alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling COL3A1 with ab283694 at 1/1000 (0.629 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on the stroma in the mouse kidney. The section was incubated with ab283694 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 LeicaDS9800 (Bond™ Polymer Refine Detection) was used.

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

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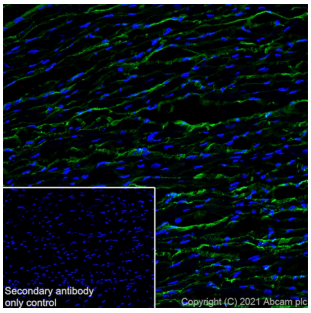
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Pro-Collagen III alpha 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of paraffin-embedded Rat kidney tissue labeling COL3A1 with ab283694 at 1/1000 (0.629 ug/ml) followed by a ready to use LeicaDS9800 (Bond™ Polymer Refine Detection) was used. Positive staining on the stroma in the rat kidney. The section was incubated with ab283694 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 LeicaDS9800 (Bond☒ Polymer Refine Detection) was used.

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

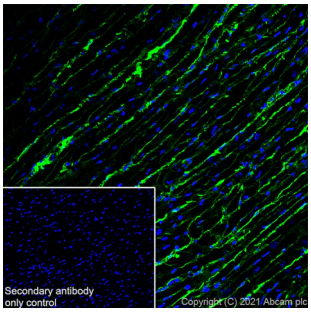
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Immunohistochemistry (Frozen sections) - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Rat cardiac muscle (fresh) tissue labeling COL3A1 with ab283694 at 1/100 (6.29 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution (Green). Cytoplasmic staining on rat cardiac muscle is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbedat 1/1000 dilution.



Immunohistochemistry (Frozen sections) - Anti-Pro-Collagen III alpha 1 antibody [RM1028] (ab283694)

Pro-Collagen III alpha 1 Immunohistochemistry (Frozen sections) staining using rabbit Anti-Pro-Collagen III alpha 1 antibody

Immunohistochemical analysis of 4% PFA-fixed, 0.2% Triton X-100 permeabilized frozen Mouse cardiac muscle (fresh) tissue labeling COL3A1 with ab283694 at 1/100 (6.29 ug/ml) dilution followed by ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution

(Green). Cytoplasmic staining on mouse cardiac muscle is observed. The nuclear counterstain was DAPI (Blue).
Secondary antibody control: Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed at 1/1000 dilution.

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