abcam

ab184993

Anti-Collagen III antibody [EPR17673]

Anti-Collagen III antibody [EPR17673] (ab184993) is a rabbit monoclonal antibody detecting Collagen III in **Western Blot, Flow Cytometry (Intra), IP, ICC/IF**. Suitable for **Human, Mouse, Rat**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 70 publications

Lab Essentials | 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	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR17673
Purification technique	Affinity purification Protein A
Concentration	0.558 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Human
Dilution info	1/30
Notes	-

Species	Mouse
Dilution info	1/30
Notes	-

Species	Rat
Dilution info	1/30
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/100
Notes	-

Species	Mouse

Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/50
Notes	-

Species	Mouse
Dilution info	1/50
Notes	-

Species	Rat
Dilution info	1/50
Notes	-

Target data

See full target information COL3A1

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	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

Anti-Collagen III antibody [EPR17673] (ab184993) was developed by Abcam using patented rabbit monoclonal antibody technology and is validated for use in Flow Cyt (Intra), ICC/IF, IP, WB in human, mouse, rat samples.

Anti-Collagen III antibody [EPR17673] (ab184993) has been cited over 70 times in peer reviewed journals and is trusted by the scientific community.

Abcams high quality manufacturing and validation processes ensure Anti-Collagen III antibody [EPR17673] (ab184993) has high sensitivity and specificity alongside high lot-to-lot consistency and reproducibility.

Anti-Collagen III antibody [EPR17673] (ab184993) specifically detects Collagen III (UniProt ID: P02461; Molecular weight: 95kDa) and is sold in 100 uL and 1 mL selling sizes.

Conjugation-ready, carrier free format available for antibody clone EPR17673 - ab224532.

Antibody clone EPR17673 is also available pre-conjugated to a variety of labels for your convenience - Alexa Fluor® 488, Alexa Fluor® 647 (ab237238, ab237239).

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	Collagen type III also known as COL3 and collagen III is a fibrillar protein with an approximate molecular mass of 138 kDa. This protein is a significant component of

	the extracellular matrix and is mainly expressed in connective tissues like skin lungs and vascular walls. You can also find it in developing tissues and fibrotic tissues reflecting its role during tissue growth and repair processes.
Biological function summary	Collagen type III contributes to maintaining the structural integrity of tissues. It forms a complex with collagen type I providing a scaffold that ensures mechanical strength and stability to tissues. This structural pairing of collagen type I and III highlights their cooperative function in supporting the extracellular matrix and regulating cell behavior in tissue repair and wound healing processes.
Pathways	Collagen type III is integral to the processes of tissue repair and fibrosis pathways. It interacts closely with proteins such as fibronectin and integrins contributing to the cellular adhesion and signaling pathways important for fibroblast function and migration. These interactions reflect its essential role in matrix assembly and stability influencing how cells respond to injury and repair damaged tissues.
Associated diseases and disorders	Collagen type III mutations or dysregulation associate with vascular Ehlers-Danlos syndrome and keloids. In vascular Ehlers-Danlos syndrome defective collagen III compromises vessel wall integrity resulting in vascular fragility and rupture. In the context of keloids excessive collagen III accumulation in the skin illustrates its role in pathological fibrosis. Collagen type I is another protein that plays an important role in these conditions contributing along with collagen type III to the altered structural and functional properties observed in these disorders.

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

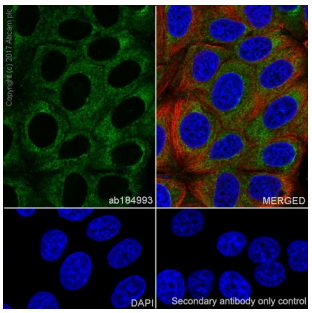
We do not recommend this combination. It is not covered by our product promise.

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.

15 product images

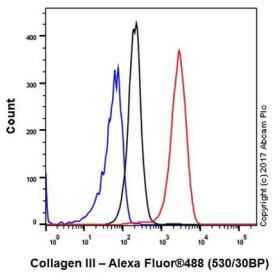


Immunocytochemistry/ Immunofluorescence - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Collagen III antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized MCF7 (human breast adenocarcinoma cell line) cells labeling Collagen III with ab184993 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on MCF7 cells.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

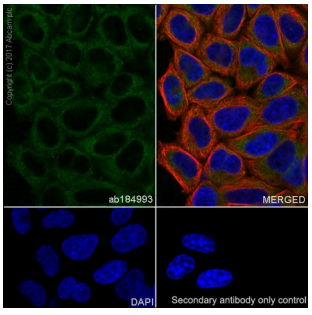
Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Flow Cytometry (Intracellular) - Anti-Collagen III antibody [EPR17673] (ab184993)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cell line labeling Collagen IIIwith ab184993 at 1/50 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 dilution was used as the secondary antibody.

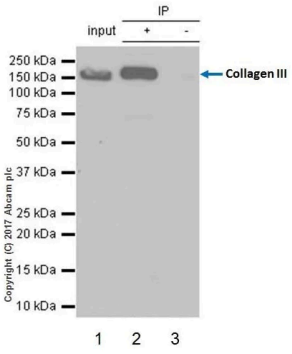


Immunocytochemistry/ Immunofluorescence - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-Collagen III antibody

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized HeLa (human epithelial cell line from cervix adenocarcinoma) cells labeling Collagen III with ab184993 at 1/100 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa cells.
The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution.

Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution.



Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab184993 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184993 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/10000 dilution.
Lane 1: HeLa whole cell lysate 10 µg (Input).

Lane 2: ab184993 IP in HeLa whole cell lysate .

Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab184993 in HeLa whole cell lysate .

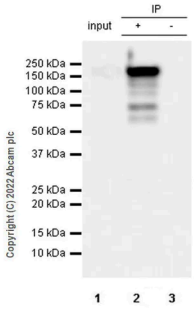
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 10 seconds.

All lanes:
Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

Predicted band size: 139 kDa

Observed band size: 150 kDa



Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III was immunoprecipitated from 0.35 mg of HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate with ab184993 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184993 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: HeLa whole cell lysate 10 µg (Input). Lane 2: ab184993 IP in HeLa whole cell lysate . Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab184993 in HeLa whole cell lysate . Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 5.5 seconds.
All lanes:
Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

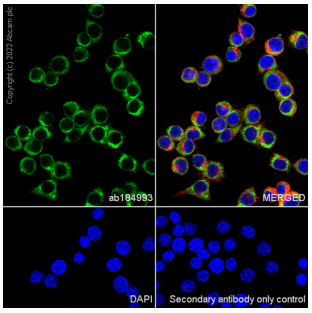
Lane 1:
HeLa whole cell lysate 10 µg (Input)

Lane 2:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate

Secondary

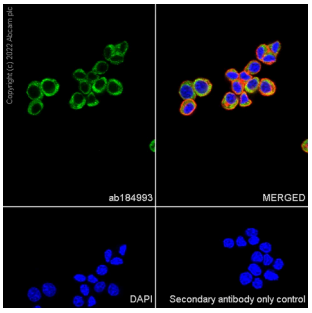
All lanes:
Immunoprecipitation - VeriBlot for IP Detection Reagent (HRP) (ab131366) at 1/5000 dilution

Exposure time: 5.5s



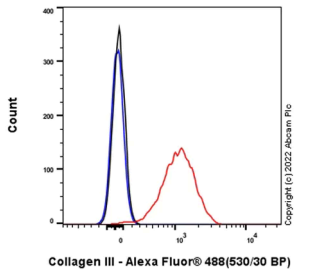
Immunocytochemistry/ Immunofluorescence - Anti-Collagen III antibody [EPR17673] (ab184993)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized RAW 264.7 (mouse abelson murine leukemia virus-induced tumor macrophage) cell line labeling Collagen III with ab184993 at 1/50 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary antibody (ab150081) at 1/1000 dilution (green). Confocal image showing cytoplasmic staining in RAW 264.7 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution. Secondary antibody only control: Used PBS instead of primary antibody, secondary is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary antibody (ab150081) at 1/1000 dilution.



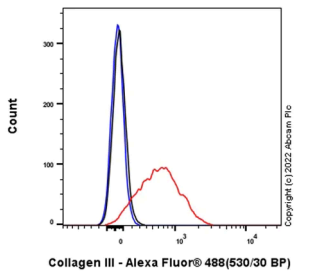
Immunocytochemistry/ Immunofluorescence - Anti-Collagen III antibody [EPR17673] (ab184993)

Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized PC-12 (rat adrenal gland pheochromocytoma small irregularly shaped cells) cell line labeling Collagen III with ab184993 at 1/50 dilution followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary antibody (ab150081) at 1/1000 dilution (green).Confocal image showing cytoplasmic staining in PC-12 cell line. The nuclear counter stain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) (red) at 1/200 dilution. Secondary antibody only control: Used PBS instead of primary antibody, secondary is Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) preadsorbed secondary antibody (ab150081) at 1/1000 dilution.



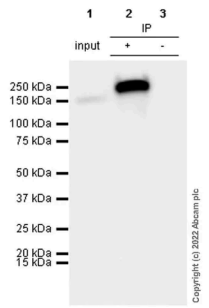
Flow Cytometry (Intracellular) - Anti-Collagen III antibody [EPR17673] (ab184993)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized RAW 264.7 (Mouse Abelson murine leukemia virus-induced tumor macrophage) cell line labeling Collagen III with ab184993 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150081) at 1/2000 dilution was used as the secondary antibody.



Flow Cytometry (Intracellular) - Anti-Collagen III antibody [EPR17673] (ab184993)

Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed, 90% methanol permeabilized PC-12 (Rat adrenal gland pheochromocytoma) cell line labeling Collagen III with ab184993 at 1/500 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A] - Isotype Control (ab172730) (black) and an unlabeled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III was immunoprecipitated from 0.35 mg of RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate with ab184993 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184993 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: RAW 264.7 whole cell lysate 10 µg (Input). Lane 2: ab184993 IP in RAW 264.7 whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab184993 in RAW 264.7 whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 3.25 seconds. Lysate was freshly made and used immediately to minimize protein degradation.
All lanes:
Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

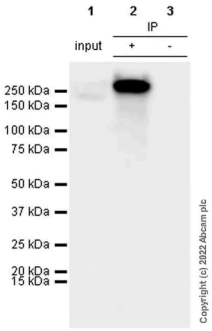
Lane 1:
RAW 264.7 whole cell lysate 10 µg (Input).

Lane 2:
RAW 264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate

Secondary

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

Exposure time: 3.25s



Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III was immunoprecipitated from 0.35 mg of PC-12 (rat adrenal gland pheochromocytoma cell), whole cell lysate with ab184993 at 1/30 dilution. Western blot was performed from the immunoprecipitate using ab184993 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366), was used for detection at 1/5000 dilution. Lane 1: PC-12 whole cell lysate 10 µg (Input). Lane 2: ab184993 IP in PC-12 whole cell lysate. Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab184993 in PC-12 whole cell lysate. Blocking and dilution buffer and concentration: 5% NFDM/TBST. Exposure time: 3.25 seconds. Lysate was freshly made and used immediately to minimize protein degradation.
All lanes:
Immunoprecipitation - Anti-Collagen III antibody [EPR17673] (ab184993) at 1/1000 dilution

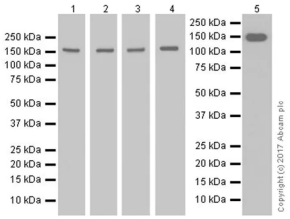
Lane 1:
PC-12 whole cell lysate 10 µg (Input).

Lane 2:
PC-12 (rat adrenal gland pheochromocytoma cell), whole cell lysate

Secondary

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

Exposure time: 3s



Western blot - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III Western blot staining using rabbit Anti-Collagen III antibody

Exposure time : Lane 1: 3 minutes; Lane 2: 15 seconds; Lane 3: 3 seconds; Lanes 4-5: 30 seconds.
Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 26017148).

All lanes:
Western blot - Anti-Collagen III antibody [EPR17673] (ab184993) at 1/1000 dilution

Lane 1:
Human fetal liver lysate at 20 µg

Lane 2:
Human fetal kidney lysate at 20 µg

Lane 3:
HeLa (human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 4:
MCF7 (human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 5:
HaCaT (human keratinocyte cell line) whole cell lysate at 10 µg

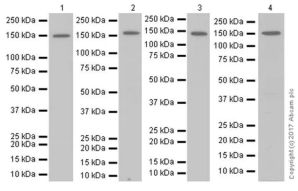
Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Predicted band size: 139 kDa

Observed band size: 150 kDa



Western blot - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III Western blot staining using rabbit Anti-Collagen III antibody

Exposure time : Lanes 1-3: 30 seconds; Lane 4: 5 seconds.
Blocking/Dilution buffer: 5% NFDM/TBST.

The molecular weight observed is consistent with what has been described in the literature (PMID: 26017148).

All lanes:
Western blot - Anti-Collagen III antibody [EPR17673] (ab184993) at 1/1000 dilution

Lane 1:
Human skin lysate at 10 µg

Lane 2:
Human skeletal muscle lysate at 10 µg

Lane 3:
Human heart lysate at 10 µg

Lane 4:
A431 (human epidermoid carcinoma cell line) whole cell lysate at 10 µg

Secondary

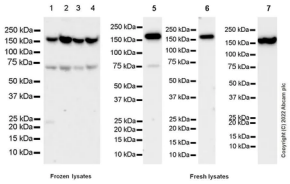
Lane 1:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Lanes 2 - 4:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Developed using the ECL technique.

Predicted band size: 139 kDa

Observed band size: 150 kDa



Western blot - Anti-Collagen III antibody [EPR17673] (ab184993)

Exposure time : Lanes 1-4: 92 seconds; Lanes 5-6: 48 seconds; Lane 7: 37 seconds.
Blocking/Dilution buffer: 5% NFDM/TBST. In lane 1-4, the lysates were stored at -80☒ prior to Western Blotting. In lane 5-7, the lysates were freshly made and used for Western Blotting immediately to minimize protein degradation.
All lanes:
Western blot - Anti-Collagen III antibody [EPR17673] (ab184993) at 1/1000 dilution

Lane 1:
C6 (rat glial tumor glial cell), whole cell lysate at 20 µg

Lane 2:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell lysate at 20 µg

Lane 3:
PC-12 (rat adrenal gland pheochromocytoma), whole cell lysate at 20 µg

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

Lane 5:
C6 (rat glial tumor glial cell), whole cell fresh lysate at 20 µg

Lane 6:
RAW264.7 (mouse Abelson murine leukemia virus-induced tumor macrophage), whole cell fresh lysate at 20 µg

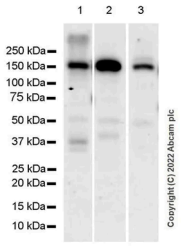
Lane 7:
PC-12 (rat adrenal gland pheochromocytoma), whole cell fresh lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 139 kDa

Observed band size: 150 kDa



Western blot - Anti-Collagen III antibody [EPR17673] (ab184993)

Collagen III Western blot staining using rabbit Anti-Collagen III antibody

Blocking buffer and concentration : 5% NFDM/TBST Diluting buffer and concentration : 5% NFDM/TBST
All lanes:
Western blot - Anti-Collagen III antibody [EPR17673] (ab184993) at 1/1000 dilution

Lane 1:
Mouse skeletal muscle tissue lysate at 20 µg

Lane 2:
Mouse heart tissue lysate at 20 µg

Lane 3:
Rat skeletal muscle tissue lysate at 20 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Developed using the ECL technique.

Performed under reducing conditions.

Predicted band size: 139 kDa

Observed band size: 150 kDa

Exposure time: 3min

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