abcam

ab253185

Anti-Extracellular matrix protein 1 antibody [EPR22411-279]

Recombinant | RabMAb | KO Validated

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	EPR22411-279
Purification technique	Affinity purification Protein A
Concentration	0.527 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Expected

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

WB

Tested

Species	Rat
Dilution info	1/1000
Notes	-

Species	Mouse
Dilution info	1/1000
Notes	-

IHC-P

Tested

Species	Mouse, Rat
Dilution info	-
Notes	-

ICC/IF

Not recommended

Species	Mouse, Rat
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/500
Notes	-

Expected

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

Target data

See full target information Extracellular matrix protein 1

Function	Involved in endochondral bone formation as negative regulator of bone mineralization. Stimulates the proliferation of endothelial cells and promotes angiogenesis. Inhibits MMP9 proteolytic activity (By similarity).

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	Extracellular matrix protein 1 often called ECM1 is a matrix protein involved in various mechanical functions in the body. This protein weighs approximately 61 kDa and is widely expressed in human tissues including skin bone lung and brain. ECM1 also goes by the name H3300 vector used in some experimental contexts. Being an extracellular matrix (ECM) component ECM1 plays roles in tissue organization influencing matrix proteins' structural integrity.
Biological function summary	ECM1 contributes to cell-matrix interactions and regulates various cell behaviors such as adhesion proliferation and differentiation. It does this by binding to other ECM proteins and is known not to be part of a specific complex. ECM1 facilitates communication between the cellular environment and matrix thereby supporting the architecture and dynamics of tissues. It modulates angiogenesis linking it with processes like wound healing and vascular development.
Pathways	ECM1 functions within the context of key signaling routes such as the PI3K/AKT pathway known for roles in cell growth and survival. ECM1 interacts with other proteins including matrix metalloproteinases contributing to matrix remodeling activities important for cellular migration and invasion. Cumulatively these interactions highlight ECM1’s place in connective tissue organization and regenerative processes.
Associated diseases and disorders	ECM1’s dysregulation links it with lipoid proteinosis and skin conditions like Atopic Dermatitis. Imbalances in ECM1 expression or function can lead to abnormal ECM assembly influencing these diseases' development. Moreover abnormalities in ECM1 can alter the behavior of related proteins such as collagen impacting skin integrity and permeability. Understanding ECM1’s role could provide insights into therapeutic strategies for these conditions.

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.

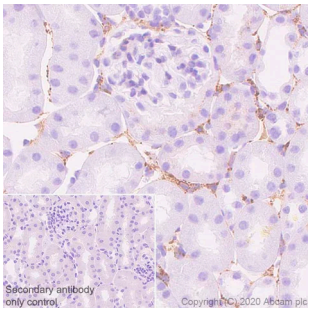
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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

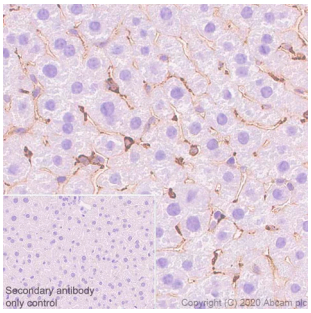


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labeling Extracellular matrix protein 1 with ab253185 at 1/5000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). The section was incubated with ab253185 for 10 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 Goat Anti-Rabbit IgG H&L (HRP Polymer)

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

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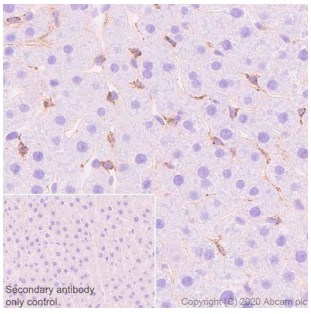


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Extracellular matrix protein 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Extracellular matrix protein 1 antibody

Immunohistochemical analysis of paraffin-embedded Mouse live tissue labeling Extracellular matrix protein 1 with ab253185 at 1/5000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). The section was incubated with ab253185 for 10 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument Counterstained with Hematoxylin.
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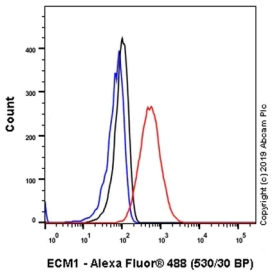


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Extracellular matrix protein 1 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Extracellular matrix protein 1 antibody

Immunohistochemical analysis of paraffin-embedded Rat liver tissue labeling Extracellular matrix protein 1 with ab253185 at 1/5000 dilution followed by a ready to use Goat Anti-Rabbit IgG H&L (HRP Polymer). The section was incubated with ab253185 for 10 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 Goat Anti-Rabbit IgG H&L (HRP Polymer)

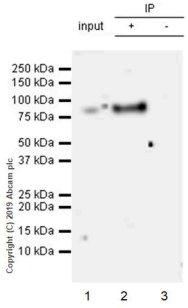
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins



Flow Cytometry (Intracellular) - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Extracellular matrix protein 1 Flow Cytometry (Intracellular) staining using rabbit Anti-Extracellular matrix protein 1 antibody

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide ab253185.Flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized 4T1 (Mouse mammary gland carcinoma epithelial cell) cells labelling Extracellular matrix protein 1 with ab253185 at 1/500 (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.



Immunoprecipitation - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab253185).

Extracellular matrix protein 1 was immunoprecipitated from 0.35 mg Mouse liver lysate 10ug with ab253185 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab253185 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: Mouse liver lysate 10ug
Lane 2: ab253185 IP in Mouse liver lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253185 in Mouse liver lysate

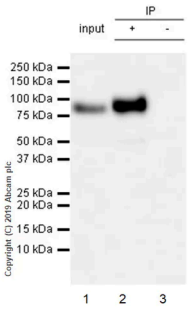
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 3 min

All lanes:
Immunoprecipitation - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Predicted band size: 61 kDa

Observed band size: 85 kDa



Immunoprecipitation - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol and sodium azide (ab253185).

Extracellular matrix protein 1 was immunoprecipitated from 0.35 mg Mouse lung lysate 10ug with ab253185 at 1/30 dilution (2ug in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab253185 at 1/1000 dilution. VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.

Lane 1: Mouse lung lysate 10ug
Lane 2: ab253185 IP in Mouse lung lysate
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab253185 in Mouse lung lysate

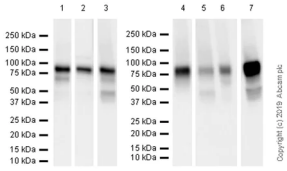
Blocking and dilution buffer and concentration: 5% NFDM/TBST.

Exposure time: 30 seconds

All lanes:
Immunoprecipitation - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Predicted band size: 61 kDa

Observed band size: 85 kDa



Western blot - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Extracellular matrix protein 1 Western blot staining using rabbit Anti-Extracellular matrix protein 1 antibody

Mouse ECM1 has two isoforms: A long isoform reported to be 85 kDa, and the shorter form 48 kDa. The molecular weight observed is consistent with what has been described in the literature (PMID: 7608209; PMID: 23202415).

Exposure times: Lanes 1-2: 7.75 seconds; Lane 3: 1 second; Lanes 4-7: 10 seconds.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185) at 1/1000 dilution

Lane 1:
4T1 (mouse mammary gland carcinoma epithelial cell), whole cell lysate at 20 µg

Lane 2:
LLC1 (mouse lung carcinoma), whole cell lysate at 20 µg

Lane 3:
Hepa1-6 (mouse hepatoma epithelial cell), whole cell lysate at 20 µg

Lane 4:
Mouse skin lysate at 20 µg

Lane 5:
Mouse liver lysate at 20 µg

Lane 6:
Rat skin lysate at 20 µg

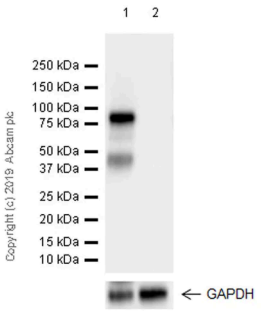
Lane 7:
Rat liver lysate at 20 µg

Secondary

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

Predicted band size: 61 kDa

Observed band size: 48 kDa, 85 kDa



Western blot - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185)

Extracellular matrix protein 1 Western blot staining using rabbit Anti-Extracellular matrix protein 1 antibody

The wild-type and ECM1 knockout mouse liver lysates were kindly provided by an anonymous collaborator.
ab253185 was shown to specifically react with Extracellular matrix protein 1 in wild-type mouse liver as signal was lost in ECM1 knockout liver. Wild-type and ECM1 knockout samples were subjected to SDS-PAGE. ab253185 and ab181602 (Rabbit anti-GAPDH loading control) were incubated 1 hour at room temperature at 1/1000 dilution and 1/200,000 dilution respectively. Blots were developed with Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated (ab97051) secondary antibody at 1/50,000 dilution for 1 hour at room temperature before imaging. The blot was developed on a BIO-RAD® ChemiDoc™ MP instrument using the ECL technique.

Exposure time 7.75 secs.

Blocking/Dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-Extracellular matrix protein 1 antibody [EPR22411-279] (ab253185) at 1/1000 dilution

Lane 1:
Wild-type mouse liver lysate at 20 µg

Lane 2:
ECM1 knockout mouse liver lysate at 20 µg

Secondary

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

Predicted band size: 61 kDa

Observed band size: 48 kDa, 85 kDa

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