abcam

ab290636

Anti-SPARC antibody [EPR25122-122]

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	EPR25122-122
Purification technique	Affinity purification Protein A
Specificity	This antibody does not react with Rat species for IHC application.
Concentration	0.616 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

ICC/IF

Tested

Species	Mouse
Dilution info	1/100
Notes	-

Species	Rat
Dilution info	1/100
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IP

Tested

Species	Mouse
Dilution info	1/30
Notes	-

Species	Rat
Dilution info	1/30
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Mouse
Dilution info	1/1000
Notes	-

Species	Rat
Dilution info	1/1000
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/5000
Notes	-

Not recommended

Species	Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Mouse
Dilution info	1/600
Notes	-

Species	Rat
Dilution info	1/600
Notes	-

Not recommended

Species	Human
Dilution info	-
Notes	-

Target data

See full target information Sparc

Function	Appears to regulate cell growth through interactions with the extracellular matrix and cytokines. Binds calcium and copper, several types of collagen, albumin, thrombospondin, PDGF and cell membranes. There are two calcium binding sites; an acidic domain that binds 5 to 8 Ca(2+) with a low affinity and an EF-hand loop that binds a Ca(2+) ion with a high affinity.

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	SPARC also known as Secreted Protein Acidic and Rich in Cysteine or osteonectin is a glycoprotein with a molecular mass of approximately 32 to 43 kDa. It is widely expressed in various tissues notably within the bone skin and extracellular matrix. SPARC influences cell-matrix interactions and modulates cellular functions such as proliferation and migration. The protein plays a role in tissue remodeling and wound healing by interacting with structural components of the matrix and regulating cell adhesion.
Biological function summary	SPARC impacts processes related to cell communication and matrix dynamics. It does not form part of large complexes but functions through interactions with matrix molecules and receptors. SPARC regulates collagen fibrillogenesis and influences the bioavailability of growth factors. It further affects angiogenesis through its ability to alter cellular adhesion and spreading which impacts vascular development and repair processes.
Pathways	SPARC integrates into regulatory cascades such as the WNT signaling and TGF-β pathways. These pathways are essential for cellular growth repair and differentiation. In the context of the TGF-β signaling pathway SPARC modulates interactions with proteins like integrins and collagens impacting fibrotic processes and matrix assembly.
Associated diseases and disorders	Alterations in SPARC expression show associations with cancer and fibrosis. The protein functions in tumor progression where it can influence tumor cell interactions with the stroma and affect cell migration and invasion. Furthermore in fibrotic diseases SPARC regulates the deposition and organization of collagen contributing to tissue stiffening. Connections are evident between SPARC and other matrix proteins like fibronectin known for their roles in these pathological 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.

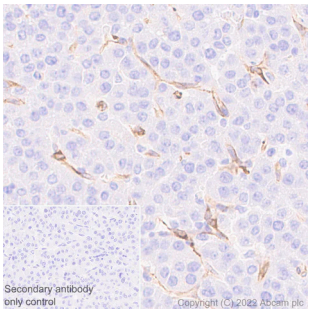
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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12 product images

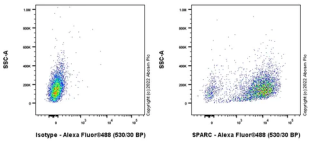


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SPARC antibody [EPR25122-122] (ab290636)

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

Immunohistochemical analysis of paraffin-embedded mouse hepatocellular tissue labelling SPARC with ab290636 at 1/15000 (0.041 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection) . Positive staining on interstitial cells of mouse hepatocellular carcinoma. The section was incubated with ab290636 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) .

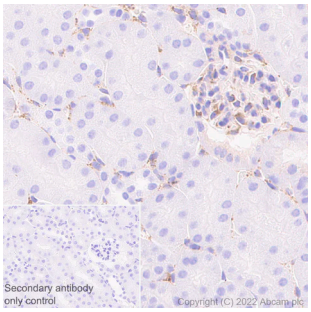
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-SPARC antibody [EPR25122-122] (ab290636)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Rat primary neuron cells labelling SPARC with ab290636 at 1/600 dilution (0.1µg) (Right) compared with a Rabbit monoclonal IgG (ab172730) (Left). A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.

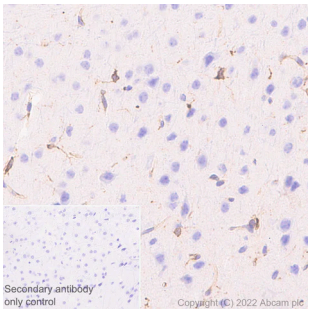


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SPARC antibody [EPR25122-122] (ab290636)

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

Immunohistochemical analysis of paraffin-embedded Mouse kidney tissue labelling SPARC with ab290636 at 1/15000 (0.041 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection) . Positive staining on glomerulus and endothelium of mouse kidney. The section was incubated with ab290636 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) .

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

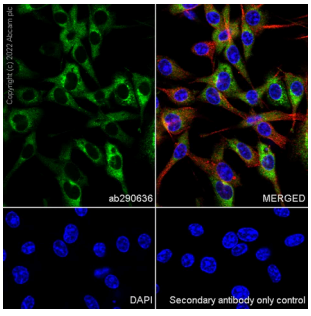


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-SPARC antibody [EPR25122-122] (ab290636)

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

Immunohistochemical analysis of paraffin-embedded mouse cerebrum tissue labelling SPARC with ab290636 at 1/15000 (0.041 µg/ml) followed by a ready to use LeicaDS9800 (BOND™ Polymer Refine Detection) . Positive staining on microglia of mouse cerebrum. The section was incubated with ab290636 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) .

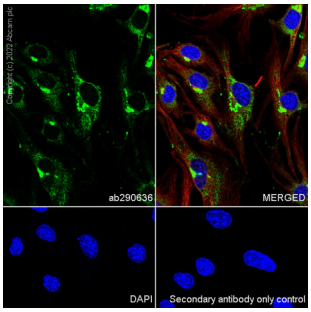
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution2) for 20 mins.



Immunocytochemistry/ Immunofluorescence - Anti-SPARC antibody [EPR25122-122] (ab290636)

SPARC Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SPARC antibody

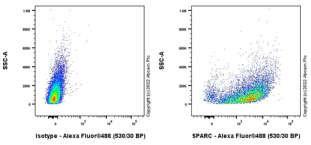
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized C6 (rat glial tumour cell line) cells labelling SPARC with primary antibody anti-SPARC (ab290636) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150081) secondary antibody at 1/1000 dilution (2.0 µg/mL). Confocal image showing cytoplasmic staining in C6 cells. Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain tubulin at 1/200 dilution (2.5 µg/mL). The nuclear counter stain is DAPI (blue). The secondary antibody only control is : Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (2.0 µg/mL).



Immunocytochemistry/ Immunofluorescence - Anti-SPARC antibody [EPR25122-122] (ab290636)

SPARC Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SPARC antibody

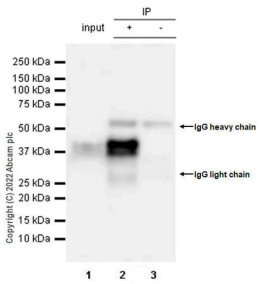
Immunofluorescent analysis of 4% paraformaldehyde-fixed, 0.1% Triton X-100 permeabilized bEnd.3 (mouse brain endothelioma cell line) cells labelling SPARC with primary antibody anti-SPARC (ab290636) at 1/100 dilution, followed by Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150081) secondary antibody at 1/1000 dilution (2.0 µg/mL). Confocal image showing cytoplasmic staining in bEnd.3 cells. Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 594) (ab195889) was used to counterstain tubulin at 1/200 dilution (2.5 µg/mL). The nuclear counter stain is DAPI (blue). The secondary antibody only control is : Secondary antibody is ab150081 Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) at 1/1000 dilution (2.0 µg/mL).



Flow Cytometry (Intracellular) - Anti-SPARC antibody [EPR25122-122] (ab290636)

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

Intracellular flow cytometric analysis of 4% paraformaldehyde fixed 90% methanol permeabilized Mouse primary neuron cell cells labelling SPARC with ab290636 at 1/600 dilution (0.1µg) (Right) compared with a Rabbit monoclonal IgG (ab172730) (Left) isotype control 0. A Goat Anti-Rabbit IgG (Alexa Fluor® 488, ab150081) at 1/2000 dilution was used as the secondary antibody.



Immunoprecipitation - Anti-SPARC antibody [EPR25122-122] (ab290636)

SPARC was immunoprecipitated from rat brain tissue lysate with ab290636 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab290636 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP)(ab131366) was used at 1/5000 dilution.
Lane 1: Rat brain tissue lysate 10 µg

Lane 2: ab290636 IP in Rat brain tissue lysate

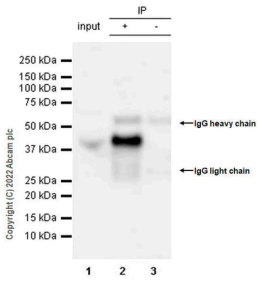
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab290636 in rat brain tissue lysate

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

Exposure time: 10 seconds

All lanes:
Immunoprecipitation - Anti-SPARC antibody [EPR25122-122] (ab290636)

Predicted band size: 35 kDa



Immunoprecipitation - Anti-SPARC antibody [EPR25122-122] (ab290636)

SPARC was immunoprecipitated from Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate with ab290636 at 1/30 dilution (2µg in 0.35mg lysates). Western blot was performed on the immunoprecipitate using ab290636 at 1/1000 dilution. VeriBlot for IP secondary antibody(HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: Neuro-2a (mouse neuroblastoma neuroblast) whole cell lysate 10 µg

Lane 2: ab290636 IP in Neuro-2a whole cell lysate

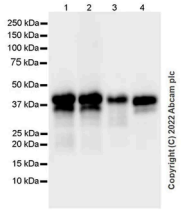
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab290636 in Neuro-2a whole cell lysate

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

Exposure time: 10 seconds

All lanes:
Immunoprecipitation - Anti-SPARC antibody [EPR25122-122] (ab290636)

Predicted band size: 35 kDa



Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636)

SPARC Western blot staining using rabbit Anti-SPARC antibody

Blocking and diluting buffer and concentration was 5% NFDM/TBST.
Exposure time: 3.25 seconds.

The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 29449802; PMID: 9008236).
The additional band is expected to be a SPARC cleavage product (PMID: 9008236).

All lanes:
Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636) at 1/1000 dilution

Lane 1:
C2C12 (mouse myoblast) whole cell lysate at 20 µg

Lane 2:
bEnd.3 (mouse brain endothelioma) whole cell lysate at 20 µg

Lane 3:
Neuro-2a (mouse neuroblastoma) whole cell lysate at 20 µg

Lane 4:
C6 (rat glioma) whole cell lysate at 20 µg

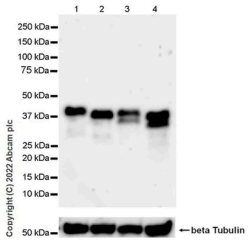
Secondary

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

Predicted band size: 35 kDa

Observed band size: 37 kDa, 40 kDa

Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636)



SPARC Western blot staining using rabbit Anti-SPARC antibody

Blocking and diluting buffer and concentration was 5% NFDM/TBST.
The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 29449802; PMID: 9008236).
SPARC is a glycosylated protein and can be deglycosylated by Protein Deglycosylation MIX II.
The additional band is expected to be a SPARC cleavage product (PMID: 9008236).

All lanes:
Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636) at 1/1000 dilution

Lane 1:
Untreated mouse brain tissue lysate at 15 µg

Lane 2:
Mouse brain tissue lysate treated with Protein Deglycosylation MIX II at 15 µg

Lane 3:
Untreated rat brain tissue lysate at 15 µg

Lane 4:
Rat brain tissue lysate treated with Protein Deglycosylation MIX II at 15 µg

Secondary

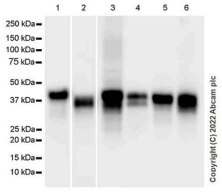
All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/100000 dilution

Predicted band size: 35 kDa

Observed band size: 37 kDa, 40 kDa

Exposure time: 103s

Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636)



SPARC Western blot staining using rabbit Anti-SPARC antibody

Blocking and diluting buffer and concentration was 5% NFDM/TBST.
The expression profile/molecular weight observed is consistent with that described in the literature (PMID: 29449802; PMID: 9008236).
The additional band is expected to be a SPARC cleavage product (PMID: 9008236).

Exposure time:

Lane 2: 5.5 seconds
Lane 1, 3-6: 3.25 seconds

All lanes:
Western blot - Anti-SPARC antibody [EPR25122-122] (ab290636) at 1/1000 dilution

Lane 1:
Mouse brain tissue lysate at 20 µg

Lane 2:
Mouse heart tissue lysate at 20 µg

Lane 3:
Mouse placenta tissue lysate at 20 µg

Lane 4:
Rat brain tissue lysate at 20 µg

Lane 5:
Rat heart tissue lysate at 20 µg

Lane 6:
Rat placenta tissue lysate at 20 µg

Secondary

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

Predicted band size: 35 kDa

Observed band size: 37 kDa, 40 kDa

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