abcam

ab251097

Anti-SLP-2 antibody [EPR18718] - BSA and Azide free

Recombinant | RabMAb | KO Validated

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EPR18718

Reactivity data

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

IP

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

WB

Tested

Species	Mouse, Rat, Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Rat

Dilution info	Use at an assay dependent concentration.
Notes	-

Target data

See full target information STOML2

Function	Mitochondrial protein that probably regulates the biogenesis and the activity of mitochondria. Stimulates cardiolipin biosynthesis, binds cardiolipin-enriched membranes where it recruits and stabilizes some proteins including prohibitin and may therefore act in the organization of functional microdomains in mitochondrial membranes. Through regulation of the mitochondrial function may play a role into several biological processes including cell migration, cell proliferation, T-cell activation, calcium homeostasis and cellular response to stress. May play a role in calcium homeostasis through negative regulation of calcium efflux from mitochondria. Required for mitochondrial hyperfusion a pro-survival cellular response to stress which results in increased ATP production by mitochondria. May also regulate the organization of functional domains at the plasma membrane and play a role in T-cell activation through association with the T-cell receptor signaling complex and its regulation.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C
Storage information	Do Not Freeze

Notes

ab251097 is the carrier-free version of ab191883.

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.

Conjugation ready
Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility
This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

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

Activity summary	SLP-2 also known as stomatin-like protein 2 is a protein with a mass of approximately 38 kDa. It is widely expressed in different tissues with high presence in mitochondrial inner membrane domains. This protein belongs to the stomatin protein family and possesses functions related to cellular compartmentalization and stability.
Biological function summary	Stomatin-like protein 2 is integral to maintaining mitochondrial morphology and function. It is closely involved in regulating mitochondrial membrane potential and apoptosis. As part of a multiprotein complex SLP-2 helps in organizing lipid and protein microdomains which are important for various mitochondrial processes and cellular energy dynamics.
Pathways	Stomatin-like protein 2 contributes significantly to the oxidative phosphorylation and apoptosis pathways. It interacts with proteins such as prohibitins which are critical in maintaining mitochondria integrity and function. These interactions highlight SLP-2's role in both energy production and programmed cell death highlighting its significance in cellular metabolic regulation and stress response.
Associated diseases and disorders	Stomatin-like protein 2 has been linked to cancer and cardiovascular disorders. Its up-regulation is often observed in various cancers suggesting a role in tumorigenesis by affecting the cellular energy balance and mitochondrial dynamics. The protein also connects to cardiolipin a lipid implicated in heart diseases illustrating its involvement in cardiovascular conditions through mitochondrial dysfunction.

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.

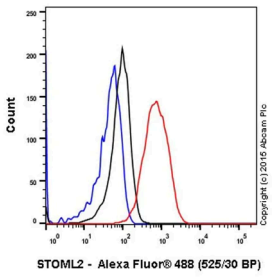
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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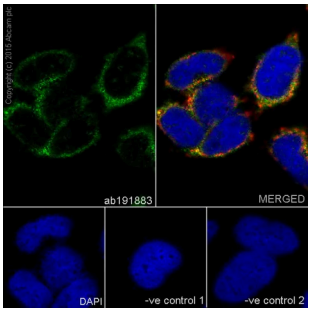
9 product images



Flow Cytometry (Intracellular) - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Flow Cytometry (Intracellular) staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Intracellular flow cytometric analysis of 4% paraformaldehyde-fixed HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling SLP-2 with ab191883 at 1/120 dilution (red) compared with a Rabbit IgG, monoclonal [EPR25A]-Isotype control (ab172730) (black) and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (blue). Goat anti Rabbit IgG (Alexa Fluor® 488) at 1/500 dilution was used as the secondary antibody.

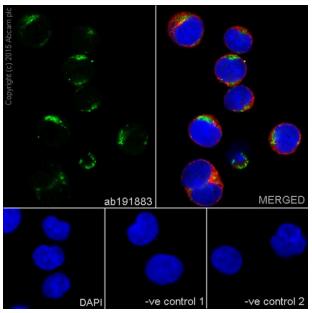


Immunocytochemistry/ Immunofluorescence - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Immunofluorescence staining of HeLa cells with ab191883 at a working dilution of 1 in 250, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 488 goat anti-rabbit (ab150077), used at a dilution of 1 in 1000 (shown in green). The mitochondria were stained with ab33985 (mouse monoclonal to COX-IV, mitochondrial marker) at 1/1000 and ab150120 at 1/1000 (shown in red). The cells were fixed in 100% methanol and permeabilized using 0.1% triton-X 100. The negative controls are shown in bottom panels. For negative control 1, ab191883 was used at a dilution of 1/250 followed by an Alexa Fluor® 594 goat anti-mouse antibody (ab150120) at a dilution of 1/1000. For negative control 2, ab7291 (mouse monoclonal to alpha tubulin) was used

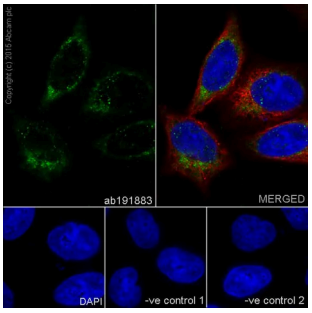
at a dilution of 1/1000 followed by ab150077 (Alexa Fluor® 488 goat anti-rabbit) at a dilution of 1/1000.



Immunocytochemistry/ Immunofluorescence - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SLP-2 antibody

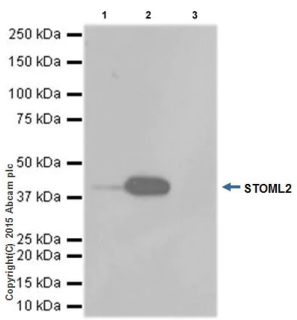
This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized Jurkat cells (Human T cell leukemia cell line from peripheral blood) labeling SLP-2 with ab191883 at 1/250 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on Jurkat cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin -Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).
The negative controls are as follows:-
-ve control 1: ab191883 at 1/250 dilution followed by ab150120 at 1/1000 dilution.
-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.



Immunocytochemistry/ Immunofluorescence - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Immunofluorescent analysis of 100% methanol-fixed, 0.1% Triton X-100 permeabilized HeLa (Human epithelial cell line from cervix adenocarcinoma) cells labeling SLP-2 with ab191883 at 1/250 dilution, followed by Goat Anti-Rabbit IgG (Alexa Fluor® 488) (ab150077) secondary antibody at 1/1000 dilution (green). Confocal image showing cytoplasmic staining on HeLa cell line. The nuclear counterstain is DAPI (blue). Tubulin is detected with Anti-alpha Tubulin -Loading Control (ab7291) at 1/1000 dilution and Goat Anti-Mouse IgG (AlexaFluor®594) preadsorbed (ab150120) at 1/1000 dilution (red).
The negative controls are as follows:-
-ve control 1: ab191883 at 1/250 dilution followed by ab150120 at 1/1000 dilution.
-ve control 2: ab7291 at 1/1000 dilution followed by ab150077 at 1/1000 dilution.

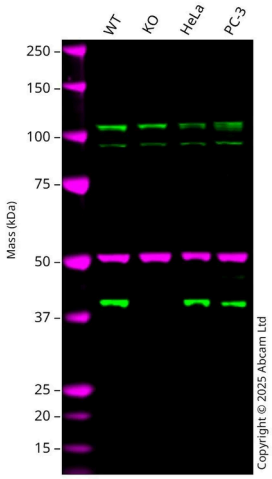


Immunoprecipitation - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
SLP-2 was immunoprecipitated from 1mg of Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate with ab191883 at 1/50 dilution. Western blot was performed from the immunoprecipitate using ab191883 at 1/1000 dilution. Veriblot for IP (HRP) (ab13136) was used as secondary antibody at 1/10000 dilution.
Lane 1: Jurkat whole cell lysate 10µg (Input).
Lane 2: ab191883 IP in Jurkat whole cell lysate.
Lane 3: Rabbit IgG,monoclonal [EPR25A] (ab172730) instead of ab191883 in Jurkat whole cell cell lysate.

Blocking and dilution buffer and concentration: 5% NFDM/TBST.
Exposure time: 30 seconds.
All lanes:
Immunoprecipitation - Anti-SLP-2 antibody [EPR18718] (ab191883)

Predicted band size: 39 kDa



Western blot - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Western blot staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.

Western blot: Anti-SLP-2 antibody [EPR18718] ab191883 staining at 1/1000 dilution, shown in green; Mouse anti alpha Tubulin (ab7291) loading control staining at 1/20,000 dilution, shown in magenta. A band was observed at 40 kDa in Wild-type A549 cell lysates with no signal observed at this size in STOML2 knockout A549 cell line.

To generate this image, samples were run on an SDS-PAGE gel then transferred onto a nitrocellulose membrane. Membranes were blocked in 3pc Milk in TBS-0.1 % Tween® 20 (TBS-T) before incubation with primary antibodies overnight at 4 °C. Blots were washed four times in TBS-T, incubated with secondary antibodies for 1 h at room temperature, washed again four times then imaged. Secondary antibodies used were Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20,000 dilution.
Lanes 1 - 4:
Western blot - Anti-SLP-2 antibody [EPR18718] (ab191883) at 1/1000 dilution

Lanes 1 - 4:
Western blot - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097) at 1/1000 dilution

Lane 1:
Wild-type A549 at 20 µg

Lane 2:
STOML2 knockout A549 at 20 µg

Lane 3:
HeLa at 20 µg

Lane 4:
PC-3 at 20 µg

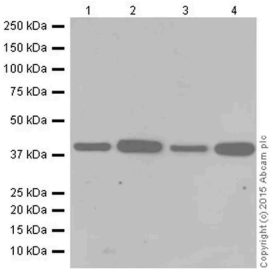
Secondary

All lanes:
Goat anti-Rabbit 800CW & Goat anti-Mouse 680RD at 1/20000 dilution

Performed under reducing conditions.

Predicted band size: 40 kDa

Observed band size: 40 kDa



Western blot - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Western blot staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-SLP-2 antibody [EPR18718] (ab191883) at 1/1000 dilution

Lane 1:
HeLa (Human epithelial cell line from cervix adenocarcinoma) whole cell lysate at 20 µg

Lane 2:
Jurkat (Human T cell leukemia cell line from peripheral blood) whole cell lysate at 20 µg

Lane 3:
MCF7 (Human breast adenocarcinoma cell line) whole cell lysate at 20 µg

Lane 4:
A549 (Human lung carcinoma cell line) whole cell lysate at 20 µg

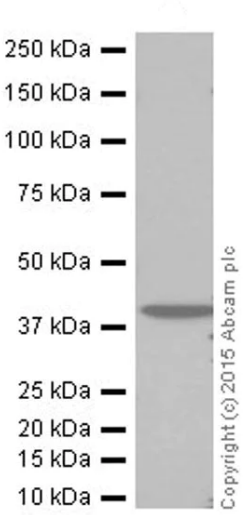
Secondary

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

Predicted band size: 39 kDa

Observed band size: 39 kDa

Exposure time: 30s



Western blot - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Western blot staining of Human fetal kidney lysate using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

All lanes:
Western blot - Anti-SLP-2 antibody [EPR18718] (ab191883) at 1/1000 dilution

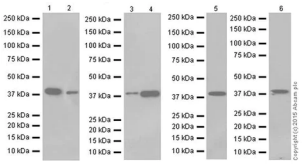
All lanes:
Human fetal kidney lysate at 10 µg

Secondary

All lanes:
Goat Anti-Rabbit IgG Peroxidase Conjugate, specific to the non-reduced form of IgG at 1/10000 dilution

Predicted band size: 39 kDa

Exposure time: 1min



Western blot - Anti-SLP-2 antibody [EPR18718] - BSA and Azide free (ab251097)

SLP-2 Western blot staining using rabbit Anti-SLP-2 antibody

This data was developed using ab191883, the same antibody clone in a different buffer formulation.
Blocking and dilution buffer: 5% NFDM/TBST.

Exposure times: Lanes 1-4: 3 minutes; Lanes 5-6: 1 minute.

All lanes:
Western blot - Anti-SLP-2 antibody [EPR18718] (ab191883) at 1/1000 dilution

Lane 1:
Mouse brain lysate at 10 µg

Lane 2:
Mouse spleen lysate at 10 µg

Lane 3:
C6 (Rat glial tumor cell line) whole cell lysate at 10 µg

Lane 4:
RAW 264.7 (Mouse macrophage cell line transformed with Abelson murine leukemia virus) whole cell lysate at 10 µg

Lane 5:
Rat brain lysate at 10 µg

Lane 6:
NIH/3T3 (Mouse embryonic fibroblast 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

Predicted band size: 227 kDa, 39 kDa

Observed band size: 39 kDa

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