abcam

ab246341

Anti-S100P antibody [EPR6142] - 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	EPR6142
Purification technique	Affinity purification Protein A
Concentration	1.065 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-
Notes	-

WB

Tested

Species	Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information S100P

Function May function as calcium sensor and contribute to cellular calcium signaling. In a calcium-dependent manner, functions by interacting with other proteins, such as EZR and PPP5C, and indirectly plays a role in physiological processes like the formation of microvilli in epithelial cells. May stimulate cell proliferation in an autocrine manner via activation of the receptor for activated glycation end products (RAGE).

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

ab246341 is the carrier-free version of ab124743.

Species reactivity
Mouse, Rat: We have preliminary internal testing data to indicate this antibody may not react with these species. Please contact us for more information.

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	S100P also known as Protein S100-P is a member of the S100 family of proteins containing 94 amino acids with a mass of approximately 10 kDa. Its structure includes two EF-hand calcium-binding motifs which allow it to bind calcium ions effectively. You can find S100P in various tissues but it is highly expressed in the

	placenta prostate lungs and kidneys. These expression patterns suggest it has multiple roles in different cellular contexts.
Biological function summary	S100P plays a role in intracellular and extracellular calcium signaling. It influences cell survival proliferation and migration. It can function as a monomer but often interacts with other proteins forming complexes such as with RAGE (Receptor for Advanced Glycation End-products) which amplifies signaling cascades that control cellular responses. Its binding to calcium and interaction with RAGE modulate important cellular processes tied to cell cycle and cellular stress response.
Pathways	S100P is closely involved in the MAPK (Mitogen-Activated Protein Kinases) and RAGE signaling pathways. Its interaction with RAGE leads to activation of the MAPK pathway facilitating cellular responses such as growth and survival. S100P also coordinates with other S100 proteins such as S100A4 and S100A9 enhancing its involvement in regulating cellular functions through these pathways. These interactions highlight the importance of S100P in cellular communication and response mechanisms.
Associated diseases and disorders	S100P is associated with various cancers like pancreatic and breast cancer. Its expression level often increases in malignancies where it promotes metastasis and poor prognosis. Through the RAGE pathway S100P influences tumor progression by altering cellular adhesion migration and immune response. In cancer biology it links with proteins such as E-cadherin and matrix metalloproteinases which further contribute to tumor invasiveness and metastasis making it a potential target for therapeutic intervention.

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

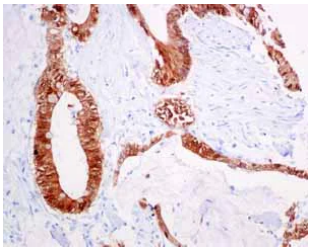
We do not recommend this combination. It is not covered by our product promise.

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.

10 product images

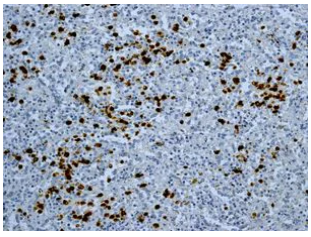


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100P antibody

Unpurified ab124743 showing positive staining in colonic adenocarcinoma tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

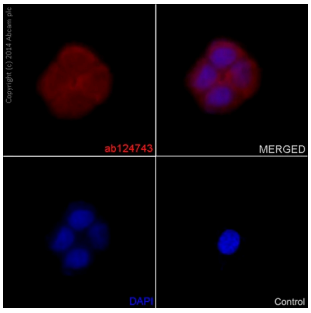


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100P antibody

Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human spleen tissue by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

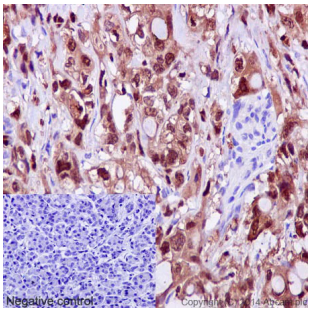
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-S100P antibody

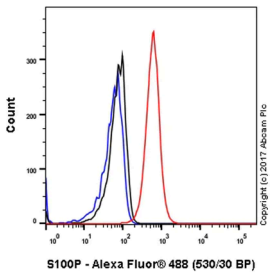
Immunofluorescence staining of BxPC-3 cells with purified ab124743 at a working dilution of 1 in 150, counter-stained with DAPI. The secondary antibody was Alexa Fluor® 555 goat anti-rabbit, used at a dilution of 1 in 500. The cells were fixed in 4% PFA. The negative control is shown in bottom right hand panel - for the negative control, purified ab124743 was used at a dilution of 1/200 followed by an Alexa Fluor® 555 goat anti-mouse antibody at a dilution of 1/500.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100P antibody

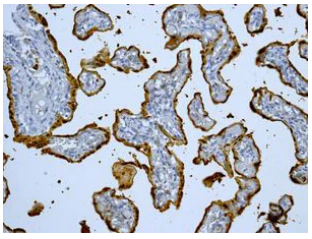
Immunohistochemical staining of paraffin embedded human pancreatic adenocarcinoma with purified ab124743 at a working dilution of 1 in 300. The secondary antibody used is a HRP polymer for rabbit IgG. The sample is counter-stained with hematoxylin. Antigen retrieval was perfomed using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).



Flow Cytometry (Intracellular) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Flow Cytometry (Intracellular) staining using rabbit Anti-S100P antibody

Intracellular Flow Cytometry analysis of BxPC-3 (human Pancreas adenocarcinoma) cells labeling S100P with purified ab124743 at 1/1700 dilution (1ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as the isotype control, cells without incubation with primary antibody and secondary antibody (Blue) were used as the unlabeled control.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

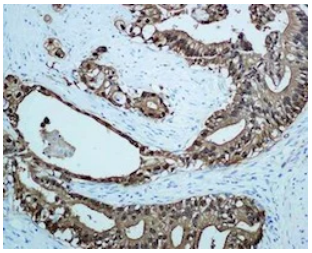


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100P antibody

Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human placenta tissue by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

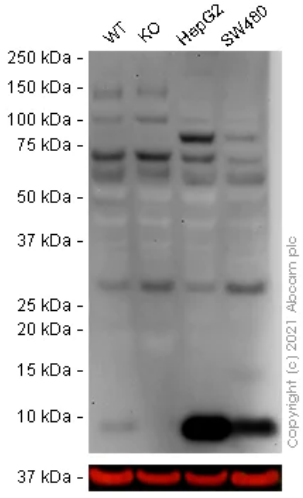


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100P antibody

Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human pancreatic adenocarcinoma tissue by immunohistochemistry.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Western blot - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

S100P Western blot staining using rabbit Anti-S100P antibody

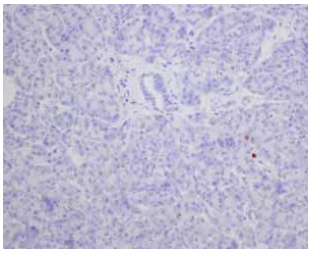
ab124743 was shown to react with S100P in wild-type HeLa cells in western blot. Loss of signal was observed when S100P knockout sampleÂ was used. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with ab124743 overnight at 4°C at a 1 in 1000 dilution. Blots were incubated with HRP conjugated Goat anti-Rabbit (H+L) secondary antibody at 1/5000 for 1 hour at room temperature before development with Optiblot ECL reagent (ab133456) and imaging.
All lanes:
Western blot - Anti-S100P antibody [EPR6142] (ab124743)

Performed under reducing conditions.

Predicted band size: 10 kDa

Observed band size: 9 kDa

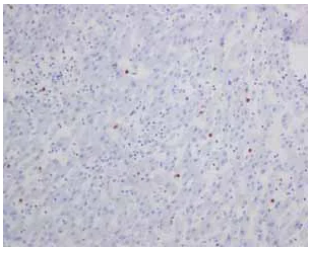
Exposure time: 20min



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

Unpurified ab124743 showing negative staining in normal pancreas tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] - BSA and Azide free (ab246341)

Unpurified ab124743 showing negative staining in normal liver tissue.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab124743).

Perform heat mediated antigen retrieval before commencing with IHC staining protocol.

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