abcam

ab124743

Anti-S100P antibody [EPR6142]

Recombinant | RabMAb | KO Validated | 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	EPR6142
Purification technique	Affinity purification Protein A
Concentration	1.762 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	1/150 - 1/300
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	1/150
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1 µg/mL
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	Conditional Ambient
Appropriate short-term storage conditions	+4°C

Appropriate long-term storage conditions	-20°C
Storage information	Stable for 12 months at -20°C

Notes

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.

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

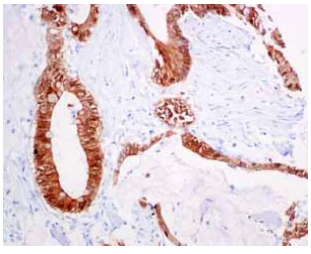
We do not recommend this combination. It is not covered by our product promise.

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.

12 product images

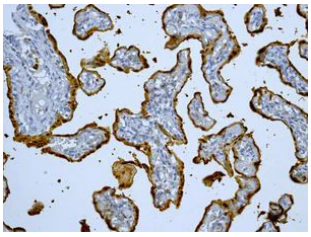


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

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

Unpurified ab124743 showing positive staining in colonic adenocarcinoma tissue.

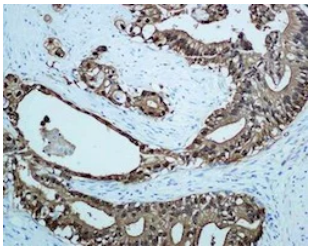
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

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

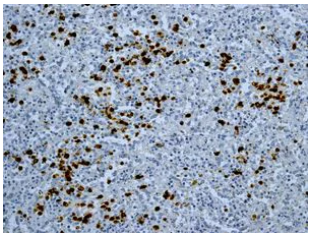
Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human placenta tissue by immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

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

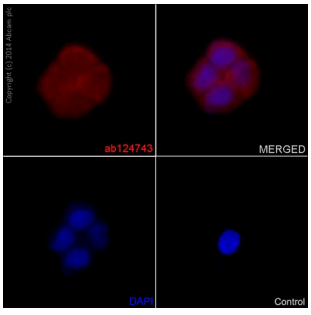
Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human pancreatic adenocarcinoma tissue by immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

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

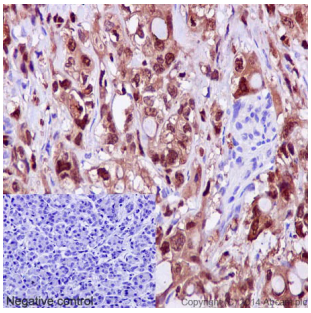
Unpurified ab124743, at 1/500 dilution, staining S100P in paraffin-embedded human spleen tissue by immunohistochemistry.
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-S100P antibody [EPR6142] (ab124743)

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.

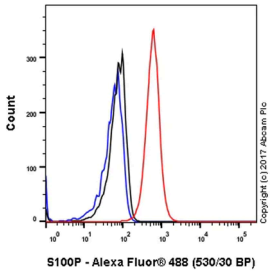


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

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

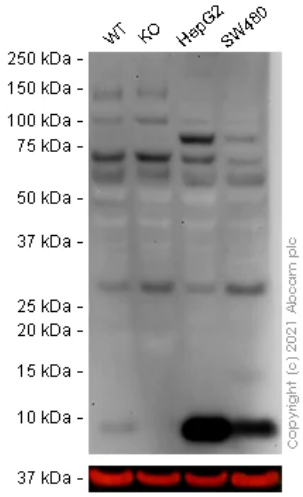
using Tris-EDTA buffer, pH 9.0. PBS was used instead of the primary antibody as the negative control, and is shown in the inset.



Flow Cytometry (Intracellular) - Anti-S100P antibody [EPR6142] (ab124743)

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.



Western blot - Anti-S100P antibody [EPR6142] (ab124743)

S100P Western blot staining using rabbit Anti-S100P antibody

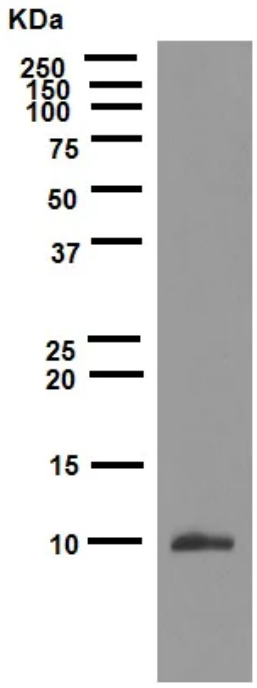
ab124743 was shown to react with S100P in wild-type HeLa cells in western blot. Loss of signal was observed when S100P knockout sample was used. Membranes were blocked in fluorescent western blot (TBS-based) blocking solution before incubation with ab124743 overnight at 4 °C at a 1 in 1000 dilution. 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



Western blot - Anti-S100P antibody [EPR6142] (ab124743)

Blocking buffer: 5% NFDM/TBST
Dilution buffer: 5% NFDM/TBST

All lanes:
Western blot - Anti-S100P antibody [EPR6142] (ab124743) at 1/1000 dilution

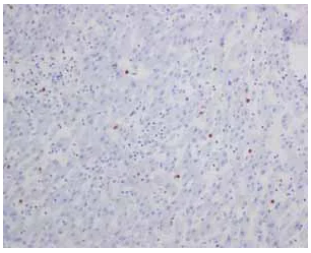
All lanes:
BxPC-3 cell lysate at 10 µg

Secondary

All lanes:
HRP goat anti-rabbit (H+L) at 1/1000 dilution

Predicted band size: 10 kDa

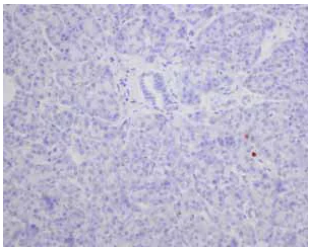
Observed band size: 10 kDa



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

Unpurified ab124743 showing negative staining in normal liver tissue.

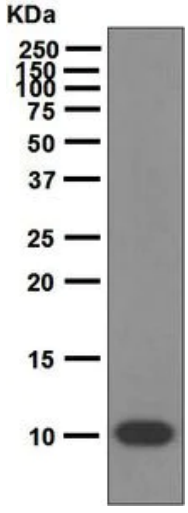
Perform heat mediated antigen retrieval before commencing with IHC staining protocol.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6142] (ab124743)

Unpurified ab124743 showing negative staining in normal pancreas tissue.

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



Western blot - Anti-S100P antibody [EPR6142] (ab124743)

All lanes:
Western blot - Anti-S100P antibody [EPR6142] (ab124743) at 1/1000 dilution

All lanes:
BxPC3 cell lysate at 10 µg

Secondary

All lanes:
Goat anti-Rabbit HRP at 1/2000 dilution

Predicted band size: 10 kDa

Observed band size: 10 kDa

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