abcam

ab225543

Anti-S100P antibody [EPR6143] - BSA and Azide free

Recombinant | RabMAb

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	EPR6143
Purification technique	Affinity purification Protein A
Dissociation constant	3.16 x 10^{-10} M
Concentration	1.036 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human
Dilution info	-

Notes	-

IP

Tested

Species	Human
Dilution info	-
Notes	-

WB

Expected

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

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab199376 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

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

ab225543 is the carrier-free version of ab133554.

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.

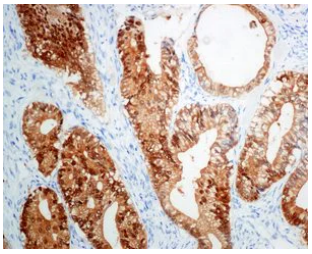
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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.

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9 product images

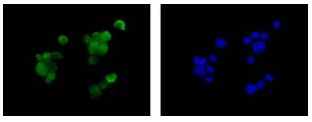


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human pancreatic adenocarcinoma tissue labelling S100P with unpurified ab133554 at 1/250.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).

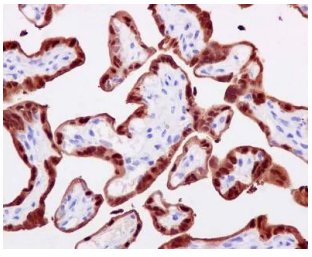
Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.



Immunocytochemistry/ Immunofluorescence - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

S100P Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-S100P antibody

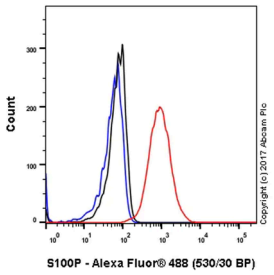
Immunocytochemistry/Immunofluorescence analysis of SW480 cells labelling S100P (green) with pruified ab133554 at 1/40. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/200) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

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

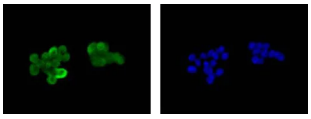
This IHC data was generated using the same anti-S100P antibody clone [EPR6143] in a different buffer formulation (cat# ab133554).
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human placenta tissue labelling S100P with unpurified ab133554 at 1/100. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Counterstained with hematoxylin.



Flow Cytometry (Intracellular) - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

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

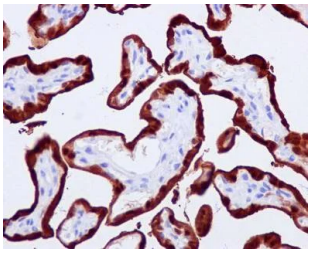
Intracellular Flow Cytometry analysis of BxPC-3 (human Pancreas adenocarcinoma) cells labeling S100P with purified ab133554 at 1/800 dilution (1ug/ml) (red). Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. A Goat anti rabbit IgG (Alexa Fluor® 488) (1/2000 dilution) was 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 (ab133554).



Immunocytochemistry/ Immunofluorescence - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

S100P Immunocytochemistry/ Immunofluorescence staining using rabbit Anti-S100P antibody

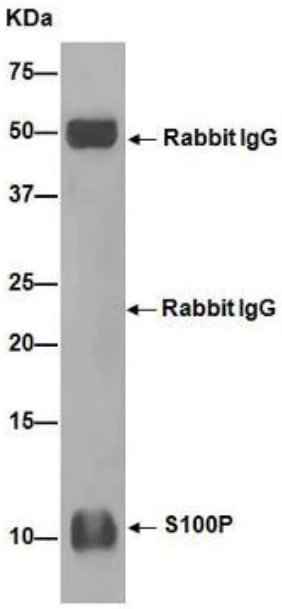
Immunocytochemistry/Immunofluorescence analysis of SW480 cells labelling S100P (green) with pruified ab133554 at 1/400. Cells were fixed with 4% paraformaldehyde. An Alexa Fluor® 488-conjugated goat anti-rabbit IgG (1/200) was used as the secondary antibody. DAPI (blue) was used as the nuclear counterstain.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human placenta tissue labelling S100P with purified ab133554 at 1/1500. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A prediluted HRP-polymer conjugated anti-rabbit IgG was used as the secondary antibody. Counterstained with hematoxylin.
This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).



Immunoprecipitation - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

ab133554 (purified) at 1/80 immunoprecipitating S100P in SW480 cells. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000). Blocking buffer and concentration: 5% NFDM/TBST.

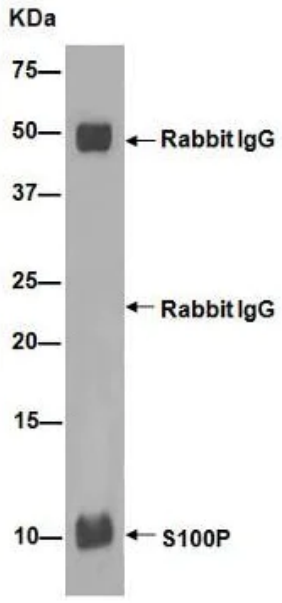
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).

All lanes:
Immunoprecipitation - Anti-S100P antibody [EPR6143] (ab133554)

Predicted band size: 10 kDa

Observed band size: 10 kDa



Immunoprecipitation - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

ab133554 (unpurified) at 1/20 immunoprecipitating S100P in SW480 cells. For western blotting, a peroxidase-conjugated goat anti-rabbit IgG (H+L) was used as the secondary antibody (1/1000). Blocking buffer and concentration: 5% NFDM/TBST.

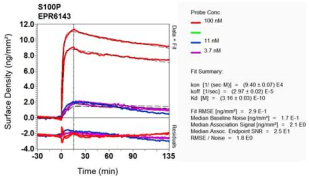
Diluting buffer and concentration: 5% NFDM /TBST.

This data was developed using the same antibody clone in a different buffer formulation containing PBS, BSA, glycerol, and sodium azide (ab133554).

All lanes:
Immunoprecipitation - Anti-S100P antibody [EPR6143] (ab133554)

Predicted band size: 10 kDa

Observed band size: 10 kDa



OI-RD Scanning - Anti-S100P antibody [EPR6143] - BSA and Azide free (ab225543)

We have systematically measured KD (the equilibrium dissociation constant between the antibody and its antigen), of more than 840 recombinant antibodies to assess not only their individual KD values but also to see the average affinity of antibody. Based on the comparison with published literature values for mouse monoclonal antibodies, Recombinant antibodies appear to be on average 1-2 order of magnitude higher affinity.

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