abcam

ab109494

Anti-S100 alpha 2/S100A2 antibody [EPR5392]

Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494) is a rabbit monoclonal antibody detecting S100 alpha 2/S100A2 in **Western Blot, Flow Cytometry (Intra), IP, IHC-P, ICC/IF**. Suitable for **Human**.

- Biophysical QC for unrivalled batch-batch consistency
- Over 10 publications

Recombinant | RabMAb

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	EPR5392
Purification technique	Affinity purification Protein A
Concentration	0.194 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

IHC-P

Tested

Species	Human

Dilution info	1/250 - 1/500
Notes	Perform heat-mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.

IP

Tested

Species	Human
Dilution info	1/10 - 1/100
Notes	-

WB

Tested

Species	Human
Dilution info	1/1000 - 1/10000
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	1/100 - 1/1000
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

ICC/IF

Tested

Species	Human
Dilution info	-
Notes	-

Target data

See full target information S100A2

Function	May function as calcium sensor and modulator, contributing to cellular calcium signaling. May function by interacting with other proteins, such as TPR-containing proteins, and indirectly play a role in many physiological processes. May also play a role in suppressing tumor cell growth.

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

What is this antibody validated in?
Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494) is a rabbit recombinant monoclonal antibody and is validated for use in Western Blot (WB), Flow Cytometry (Intra), Immunoprecipitation (IP), Immunohistochemistry (IHC-P), Immunocytochemistry/immunofluorescence (ICC/IF) in Human samples.

What is the molecular weight of S100 alpha 2/S100A2?
Anti-S100 alpha 2/S100A2 [EPR5392] (ab109494) specifically detects a band for S100 alpha 2/S100A2 (UniProt: P29034) at a molecular weight of 11kDa.

Trusted by the scientific community
Anti-S100 alpha 2/S100A2 [EPR5392] (ab109494) was first used in a scientific publication in 2011 and has been cited over 10 times in peer-reviewed journals.

Other related products
We have a range of other formats of antibody clone [EPR5392] also available for your convenience: ab109494, Carrier free - ab247877, PE - ab306147, APC - ab306148, HRP - ab306149, Alkaline Phosphatase - ab308929, Alexa Fluor® 488 - ab309858, Alexa Fluor® 647 - ab310226, Alexa Fluor® 594 - ab310674, Alexa Fluor® 555 - ab312204, Alexa Fluor® 568 - ab312693, Alexa Fluor® 750 - ab320956

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	S100 alpha 2 also known as S100A2 or CAN19 is a calcium-binding protein that plays a role in the regulation of cell functions. It's part of the S100 protein family and has a mass of approximately 11 kDa. S100A2 is expressed in a variety of tissues including epidermal cells and lung tissue suggesting its involvement in diverse cellular processes. The presence in these tissues indicates a potential role in both skin biology and respiratory system functions.
Biological function summary	S100A2 influences cell proliferation differentiation and apoptosis. It acts by modulating the activity of target proteins through a calcium-dependent mechanism. Though S100A2 is not known to form a complex with other proteins for its function it interacts with key cell growth regulators affecting cellular responses to external signals. The precise modulation of these processes implicates S100A2 in the maintenance of normal tissue homeostasis and cell cycle regulation.
Pathways	S100A2 participates in signal transduction pathways such as the MAPK/ERK and p53 pathways. In the MAPK/ERK pathway S100A2 regulates cell cycle progression and cellular responses to growth factors. Additionally in the p53 pathway S100A2 plays a role in apoptosis and tumor suppression. S100A2's function links it to interaction with critical proteins such as p53 influencing both stress response and genomic stability.
Associated diseases and disorders	S100A2 relates to cancer progression and pulmonary diseases. Altered expression levels of S100A2 have been observed in lung cancer and some skin cancers where it may act as a tumor suppressor. In pulmonary conditions its expression affects tissue responses under pathological states. The interaction of S100A2 with proteins like p53 in these disorders suggests a pivotal role in mediating stress responses and regulating tumor growth providing potential therapeutic targets.

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.

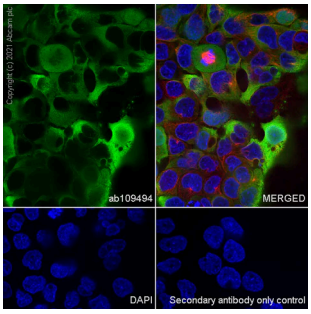
We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

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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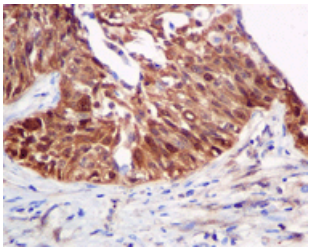
8 product images



Immunocytochemistry/ Immunofluorescence - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

S100 alpha 2/S100A2 Immunocytochemistry/ Immunofluorescence staining of A431 (Human epidermoid carcinoma epithelial cell) cells using rabbit Anti-S100 alpha 2/S100A2 antibody

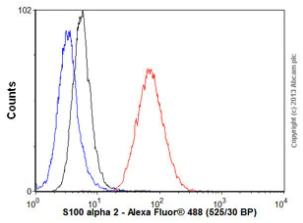
Immunocytochemistry/ Immunofluorescence analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling S100 alpha 2 using ab109494. The cells were fixed with 100% Methanol then permeabilized with 0.1% Triton X-100. The cells were then incubated with ab109494 at 1:100 dilution followed by a further incubation with a Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) at 2 µg/ml (shown in green). Nuclear DNA was labelled in blue with DAPI. Cells were counterstained using ab195889 Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) at 1:200 dilution (shown in red). Secondary antibody only control: PBS instead of the primary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

S100 alpha 2/S100A2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-S100 alpha 2/S100A2 antibody

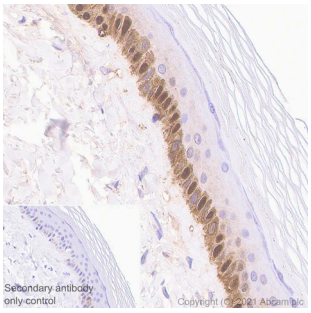
ab109494 at 1/250 dilution staining S100 alpha 2/S100A2 in paraffin-embedded Human squamous cell cervical carcinoma tissue
Perform heat mediated antigen retrieval via the pressure cooker method before commencing with IHC staining protocol.



Flow Cytometry (Intracellular) - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

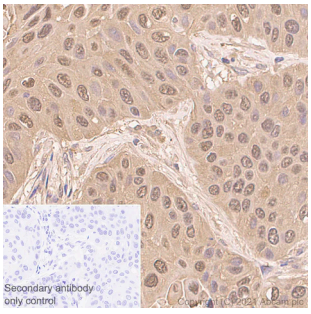
S100 alpha 2/S100A2 Flow Cytometry (Intracellular) staining using rabbit Anti-S100 alpha 2/S100A2 antibody

Overlay histogram showing A431 cells stained with ab109494 (red line). The cells were fixed with 80% methanol (5 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions followed by the antibody (ab109494 1/1000 dilution) for 30 min at 22°C. The secondary antibody used was Alexa Fluor® 488 goat anti-rabbit IgG (H&L) (ab150077) at 1/2000 dilution for 30 min at 22°C. Isotype control antibody (black line) was rabbit IgG (monoclonal) (0.1µg/1x10^6 cells) used under the same conditions. Unlabelled sample (blue line) was also used as a control. Acquisition of >5000 events were collected using a 20mW Argon ion laser (488nm) and 525/30 bandpass filter.



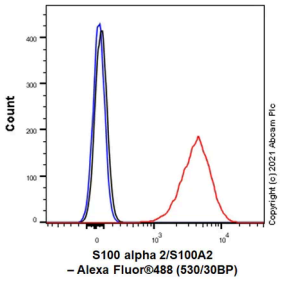
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

Immunohistochemical analysis of Paraffin-embedded sections human skin tissue labelling S100 alpha 2 with ab109494 at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on human skin tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

Immunohistochemical analysis of Paraffin-embedded sections human lung carcinoma tissue labelling S100 alpha 2 with ab109494 at 1/1000 dilution, followed by a ready to use secondary Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Staining on human lung carcinoma tissue is observed. Counter stained with Haematoxylin. Secondary antibody only control: Used PBS instead of primary antibody, secondary antibody is ready to use Rabbit specific IHC polymer detection kit HRP/DAB (ab209101). Heat mediated antigen retrieval using Bond™ Epitope Retrieval Solution 2 (pH 9.0). The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Flow Cytometry (Intracellular) - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

Intracellular Flow Cytometry analysis of A431 (Human epidermoid carcinoma epithelial cell) cells labeling S100 alpha 2 with purified ab109494 at 1/20 dilution (10 ug/ml) (Red). Cells were fixed with 80% Methanol and permeabilised with 0.1% Tween-20. A Goat anti rabbit IgG (Alexa Fluor® 488, ab150081) (1/2000 dilution) was used as the secondary antibody. Rabbit monoclonal IgG (Black) was used as a isotype control. Cell without incubation with primary antibody and secondary antibody (Blue) were used as unlabeled control.



Immunoprecipitation - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

S100 alpha 2/S100A2 was immunoprecipitated from 0.35 mg HaCaT (Human skin keratinocyte) whole cell lysate 10 µg with ab109494 at 1/20 dilution (1µg). VeriBlot for IP Detection Reagent (HRP) (ab131366) was used at 1/5000 dilution.
Lane 1: HaCaT (Human skin keratinocyte) whole cell lysate 10 µg

Lane 2: ab109494 IP in HaCaT whole cell lysate

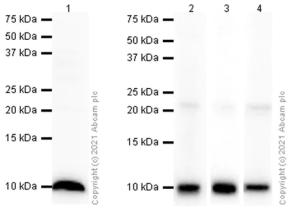
Lane 3: Rabbit monoclonal IgG (ab172730) instead of ab109494 in HaCaT whole cell lysate

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

All lanes:
Immunoprecipitation - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

Predicted band size: 11 kDa

Observed band size: 11 kDa



Western blot - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494)

All lanes:
Western blot - Anti-S100 alpha 2/S100A2 antibody [EPR5392] (ab109494) at 1/1000 dilution

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

Lane 2:
HaCaT (Human skin keratinocyte) whole cell lysate at 15 µg

Lane 3:
BxPC-3 (Human pancreas adenocarcinoma epithelial cell) whole cell lysate at 15 µg

Lane 4:
A431 (Human epidermoid carcinoma epithelial cell) whole cell lysate at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 11 kDa

Observed band size: 11 kDa

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