abcam

ab115803

Anti-S100 beta antibody [SP127] - Astrocyte Marker

Recombinant | RabMAb | 20ul selling size

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.6 Preservative: 0.1% Sodium azide Constituents: PBS, 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	SP127
Purification technique	Affinity purification Protein A/G
Concentration	0.22 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →
Purification notes	Purified from TCS by Protein A/G.

Reactivity data

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	-

Expected

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

Predicted

Species	Rabbit, Cow
Dilution info	-
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	1/100
Notes	Incubate with primary antibody for 10 minutes at room temperature.

Species	Rat
Dilution info	1/100
Notes	Incubate with primary antibody for 10 minutes at room temperature.

Species	Human
Dilution info	1/100
Notes	Incubate with primary antibody for 10 minutes at room temperature.

Predicted

Species	Rabbit, Cow
Dilution info	-
Notes	-

Target data

See full target information S100B

Function	Small zinc- and- and calcium-binding protein that is highly expressed in astrocytes and constitutes one of the most abundant soluble proteins in brain (PubMed:20950652, PubMed:6487634). Weakly binds calcium but binds zinc very tightly-distinct binding sites with different affinities exist for both ions on each monomer (PubMed:20950652, PubMed:6487634). Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites (By similarity). Acts as a neurotrophic factor that promotes astrocytosis and axonal proliferation (By similarity). Involved in innervation of thermogenic adipose tissue by acting as an adipocyte-derived neurotrophic factor that promotes sympathetic innervation of adipose tissue (By similarity). Binds to and initiates the activation of STK38 by releasing autoinhibitory intramolecular interactions within the kinase (By similarity). Interaction with AGER after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling (By similarity). Could assist ATAD3A cytoplasmic processing, preventing aggregation and favoring mitochondrial localization (PubMed:20351179). May mediate calcium-dependent regulation on many physiological processes by interacting with other proteins, such as TPR-containing proteins, and modulating their activity (PubMed:22399290).

Storage

Shipped at conditions	Conditional Ambient
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle

Supplementary info

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

Activity summary	S100 beta also known as protein S100 is part of the S100 family of proteins characterized by their calcium-binding properties. The S100 beta protein has an approximate molecular mass of 10.7 kDa. This protein is mainly expressed in astrocytes a type of glial cell in the central nervous system. It acts as a marker for astrocytes and is prominently used in astrocyte immunohistochemistry. Additionally it serves as a valuable marker for identifying and studying astrocyte markers because it can highlight the presence of these cells in various contexts.
Biological function summary	The S100 beta protein participates in several intracellular and extracellular activities influencing cell proliferation and differentiation. It forms dimers and sometimes assembles into larger complexes mediated by the binding of calcium ions which alters its functional state. Within the nervous system S100 beta modulates the dynamics between neurons and glial cells affecting processes such as cell survival and neurite outgrowth. This dual role in both supporting and inhibiting various cellular actions highlights its importance in maintaining neural homeostasis.
Pathways	S100 beta engages in signaling pathways related to inflammation and stress responses. It works within the MAPK and NF-kB pathways playing roles in cellular responses to oxidative stress. These pathways involve interactions with other proteins like p53 which S100 beta can modulate to influence apoptosis. The regulatory properties of S100 beta in these pathways link it with broader networks affecting cell fate decisions under pathological and physiological conditions.
Associated diseases and disorders	S100 beta is associated with neurodegenerative diseases and cancer. Elevated levels of S100 beta are often found in Alzheimer's disease where it interacts with proteins like amyloid-beta contributing to neuroinflammation and neurotoxicity. In cancer particularly malignant melanoma S100 beta levels serve as a biomarker for tumor progression. Its interactions with p53 and other regulatory proteins highlight its involvement in oncogenic processes emphasizing its potential as a target for therapeutic intervention in these diseases.

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

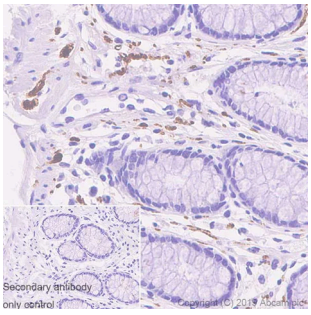
We do not recommend this combination. It is not covered by our product promise.

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.

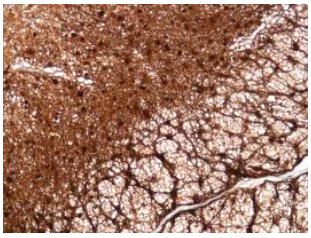
16 product images



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

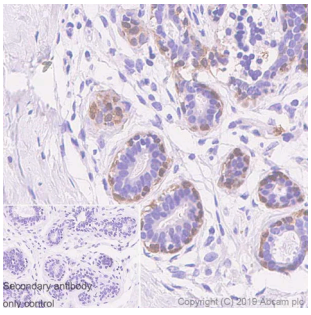
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human colon tissue sections labeling S100 beta with ab115803 at 1/100 dilution (0.45 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



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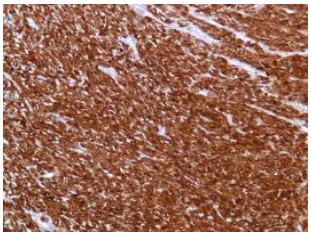
Formalin-fixed, paraffin-embedded human spinal cord tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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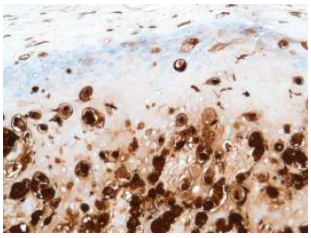
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Human breast tissue sections labeling S100 beta with ab115803 at 1/100 dilution (0.45 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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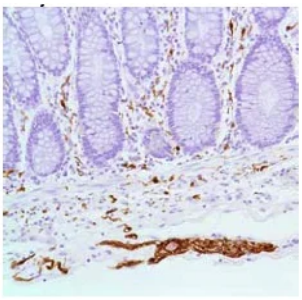
Formalin-fixed paraffin-embedded human melanoma tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

Formalin-fixed, paraffin-embedded human melanoma tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

Formalin-fixed, paraffin-embedded human colon tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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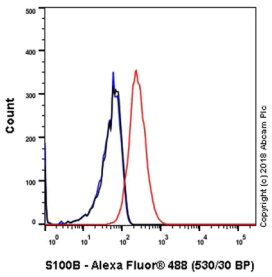
Formalin-fixed, paraffin-embedded human bladder tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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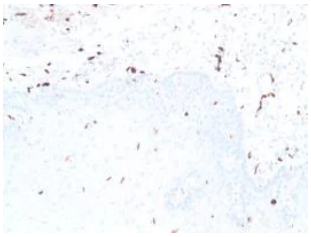
Formalin-fixed, paraffin-embedded human cerebellum tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Flow Cytometry (Intracellular) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

S100 beta Flow Cytometry (Intracellular) staining using rabbit Anti-S100 beta antibody

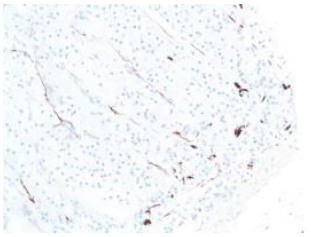
Flow Cytometry analysis of A375(Human malignant melanoma epithelial cell) cells labeling S100 beta with purified ab115803 Red. Cells were fixed with 4% paraformaldehyde . A Goat anti rabbit IgG (Alexa Fluor® 488, ab150077) was used as the secondary antibody. Isotype control - Rabbit monoclonal IgG (ab172730) / Black. Unlabeled control - Unlabelled cells / Blue.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

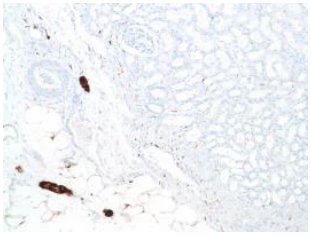
Formalin-fixed, paraffin-embedded human esophagus tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



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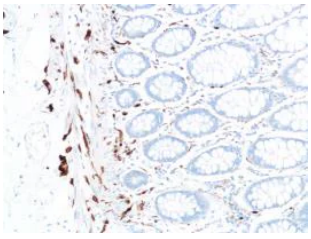
Formalin-fixed, paraffin-embedded human adrenal gland tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



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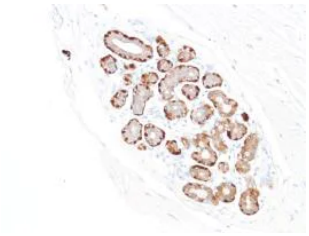
Formalin-fixed, paraffin-embedded human kidney tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



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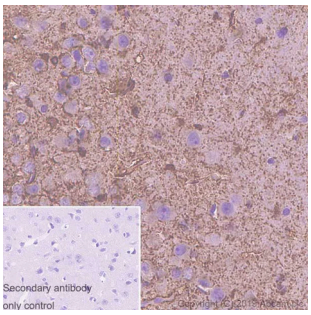
Formalin-fixed, paraffin-embedded human colon tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



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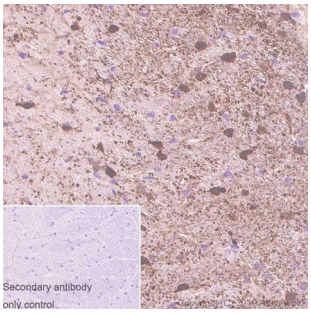
Formalin-fixed, paraffin-embedded human breast tissue stained for S100 beta using ab115803 at 1/100 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Rat cerebrum tissue sections labeling S100 beta with ab115803 at 1/100 dilution (0.45 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-S100 beta antibody [SP127] - Astrocyte Marker (ab115803)

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

Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of Mouse cerebrum tissue sections labeling S100 beta with ab115803 at 1/100 dilution (0.45 µg/ml). Heat mediated antigen retrieval was performed Heat mediated antigen retrieval with sodium citrate buffer (pH 6.0, epitope retrieval solution 1) for 20 mins. Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody. Negative control: PBS instead of the primary antibody. Hematoxylin was used as a counterstain.

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