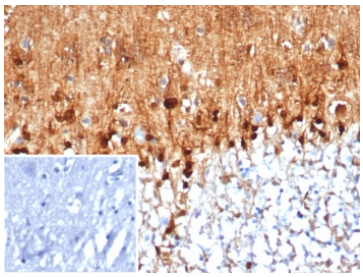
S100B Antibody / Astrocyte Marker [clone S100B/4159] (V4848)

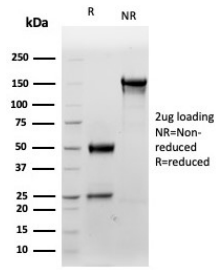
Catalog No.	Formulation	Size
V4848-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 ug
V4848-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	20 ug
V4848SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

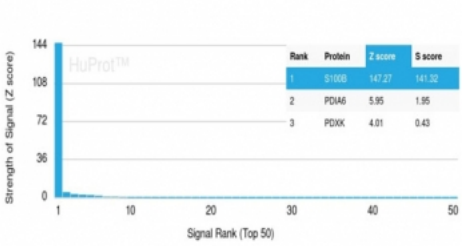
Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG1, kappa
Clone Name	S100B/4159
Purity	Protein A/G affinity
UniProt	P04271
Localization	Cytoplasm
Applications	Immunohistochemistry (FFPE): 1-2ug/ml for 30 min at RT
Limitations	This S100B/Astrocyte Marker antibody is available for research use only.



Immunohistochemistry analysis of S100B / Astrocyte Marker antibody (clone S100B/4159) in human brain tissue. FFPE human brain demonstrates strong cytoplasmic and nuclear HRP-DAB brown staining in astrocyte-like cells distributed throughout the parenchyma, consistent with S100B expression. Staining highlights cells with branching morphology characteristic of astroglial cells, while neuronal cell bodies show comparatively weaker signal. Nuclei are counterstained blue. The inset image represents a secondary antibody negative control in which PBS was used in place of the primary antibody and shows absence of specific staining.



SDS-PAGE analysis of purified, BSA-free S100B/Astrocyte Marker antibody (clone S100B/4159) as confirmation of integrity and purity.



Analysis of a HuProt(TM) microarray containing more than 19,000 full-length human proteins using S100B/Astrocyte Marker antibody (clone S100B/4159). Z- and S- Score: The Z-score represents the strength of a signal that a monoclonal antibody (in combination with a fluorescently-tagged anti-IgG secondary antibody) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If targets on HuProt(TM) are arranged in descending order of the Z-score, the S-score is the difference (also in units of SD's) between the Z-score. S-score therefore represents the relative target specificity of a mAb to its intended target. A mAb is considered to be specific to its intended target, if the mAb has an S-score of at least 2.5. For example, if a mAb binds to protein X with a Z-score of 43 and to protein Y with a Z-score of 14, then the S-score for the binding of that mAb to protein X is equal to 29.

Description

S100B antibody, also known as Astrocyte Marker antibody, recognizes S100 calcium-binding protein B, a small EF-hand calcium-binding protein encoded by the human S100B gene located on chromosome 21q22.3. S100B is predominantly localized to the cytoplasm and nucleus of astrocytes within the central nervous system and is widely used as a marker of astroglial cells. S100B antibody targets a protein highly enriched in mature astrocytes, where it contributes to calcium-dependent intracellular signaling and cytoskeletal regulation.

S100 calcium-binding protein B functions as a calcium sensor that undergoes conformational change upon calcium binding, allowing interaction with target proteins involved in cytoskeletal organization, cell proliferation, and intracellular signaling pathways. In astrocytes, S100B participates in regulation of cellular morphology, migration, and response to neural injury. It may also be secreted and function extracellularly through interaction with the receptor for advanced glycation end products, influencing inflammatory and neurotrophic signaling.

As an Astrocyte Marker antibody, S100B is widely used in neurobiology to evaluate astrocyte density, distribution, and activation status. Elevated S100B expression is observed in reactive astrocytes following trauma, ischemia, or neurodegeneration. Because of its strong and relatively specific glial enrichment, S100B antibody supports investigation of astrocyte biology and central nervous system pathology.

Application Notes

Optimal dilution of the S100B/Astrocyte Marker antibody should be determined by the researcher.

Immunogen

A recombinant partial protein sequence (within amino acids 1-92) from the human protein was used as the immunogen for the S100B/Astrocyte Marker antibody.

Storage

Aliquot the S100B/Astrocyte Marker antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.

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