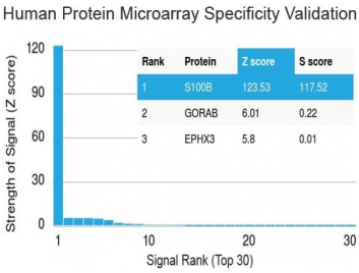
S100 beta Antibody / S100B [clone S100B/1012] (V3505)

Catalog No.	Formulation	Size
V3505-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3505-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3505SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug
V3505IHC-7ML	Prediluted in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide; *For IHC use only*	7 ml

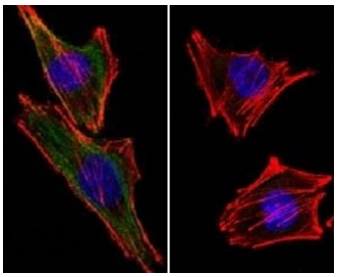
Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	S100B/1012
Purity	Protein G affinity chromatography
UniProt	P04271
Localization	Cytoplasmic, nuclear
Applications	Immunofluorescence : 1-2ug/ml Immunohistochemistry (FFPE) : 0.25-0.5ug/ml for 30 min at RT
Limitations	This S100 beta antibody is available for research use only.

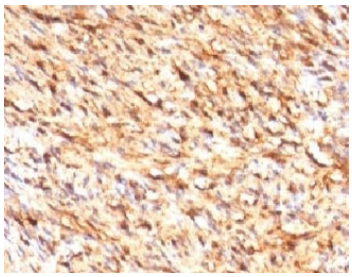


Protein array validation of the S100 beta antibody: Analysis of HuProt(TM) microarray containing more than 19,000 full-length human proteins using S100 beta antibody (clone S100B/1012). These results demonstrate the foremost specificity of the S100B/1012 mAb.

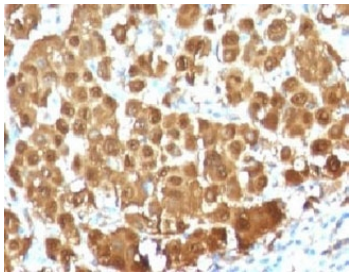
Z- and S- score: The Z-score represents the strength of a signal that an antibody (in combination with a fluorescently-tagged anti-IgG secondary Ab) produces when binding to a particular protein on the HuProt(TM) array. Z-scores are described in units of standard deviations (SD's) above the mean value of all signals generated on that array. If the targets on the 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-scores. The S-score therefore represents the relative target specificity of an Ab to its intended target.



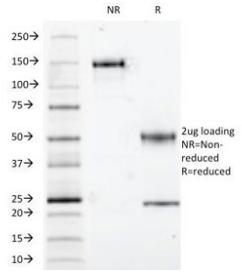
(Left) Confocal Immunofluorescent analysis of A2058 cells using AF488-labeled S100 beta antibody (green). F-actin filaments were labeled with DyLight 554 Phalloidin (red). DAPI was used to stain the cell nuclei (blue). (Right) Negative control.



IHC testing of FFPE human schwanoma with S100 beta antibody (clone S100B/1012). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.



IHC testing of FFPE human melanoma with S100 beta antibody (clone S100B/1012). Required HIER: boil tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.



SDS-PAGE Analysis of Purified, BSA-Free S100 beta Antibody (clone S100B/1012). Confirmation of Integrity and Purity of the Antibody.

Description

S100 beta antibody is a widely used reagent for detecting the calcium binding protein S100B, which belongs to the S100

family of EF hand proteins. S100B is predominantly expressed in astrocytes of the central nervous system but is also found in melanocytes, adipocytes, and certain chondrocytes. This protein serves dual intracellular and extracellular functions, regulating cytoskeletal organization, calcium homeostasis, and intercellular signaling. Because of these broad roles, S100B has become a critical marker in neuroscience, oncology, and inflammation research.

S100B regulates cellular processes by binding calcium and undergoing conformational changes that expose interaction sites for target proteins. Within cells, it controls microtubule dynamics, protein phosphorylation, and transcription factor activity. Secreted S100B acts in a paracrine fashion by engaging receptors such as RAGE, where it modulates inflammatory pathways and survival signals. At low concentrations, it promotes neuronal growth and survival, while at higher concentrations it can trigger apoptosis and inflammatory responses.

The S100 beta antibody clone S100B/1012 provides high specificity for this protein, making it a valuable tool for research across neurological and oncological contexts. Clone S100B/1012 has been applied in studies of brain injury, astrocyte activation, neurodegenerative disorders, and melanoma progression. Its performance has proven consistent in both tissue and cellular models, enabling reliable detection of S100B in experimental workflows.

Elevated S100B expression is linked to neurological diseases including Alzheimer disease, Parkinson disease, and amyotrophic lateral sclerosis. It is also a biomarker for traumatic brain injury, where increased serum levels correlate with astrocytic damage. In oncology, S100B expression is associated with melanoma aggressiveness and serves as a diagnostic and prognostic marker. Clone S100B/1012 continues to provide dependable detection for these important applications.

NSJ Bioreagents supplies this S100 beta antibody to support high quality research in neuroscience, oncology, and immune regulation. The protein is also referred to as S100 calcium binding protein B antibody, protein S100 beta chain antibody, astrocyte marker antibody, and NEF antibody. These alternate names reflect the varied ways scientists describe and investigate this important calcium binding protein.

Application Notes

Optimal dilution of the S100 beta antibody should be determined by the researcher.

1. The prediluted format is supplied in a dropper bottle and is optimized for use in IHC. After epitope retrieval step (if required), drip mAb solution onto the tissue section and incubate at RT for 30 min.

Immunogen

Recombinant full-length human protein was used as the immunogen for the S100 beta antibody.

Storage

Store the S100 beta antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).