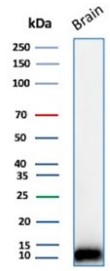
S100B Antibody [clone 4C4.9] (V3421)

Catalog No.	Formulation	Size
V3421-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3421-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3421SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

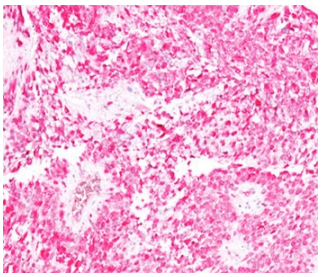
Citations (10)

Bulk quote request

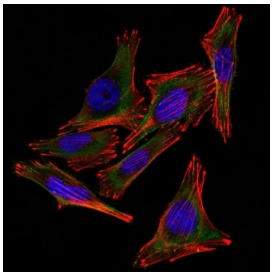
Species Reactivity	Human, Mouse, Rat
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	4C4.9
Purity	Protein G affinity chromatography
UniProt	P04271
Localization	Cytoplasmic, nuclear
Applications	Immunofluorescence : 1-2ug/ml Western Blot : 1-2ug/ml Immunohistochemistry (FFPE) : 0.25-0.5ug/ml for 30 min at RT
Limitations	This **S100B antibody** is available for research use only.



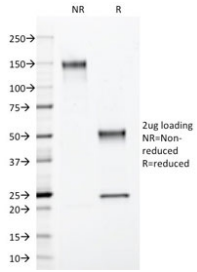
Western blot testing of human brain tissue lysate using S100B antibody (clone 4C4.9). Predicted molecular weight: 12-15 kDa.



IHC testing of human melanoma stained with S100B antibody + AEC chromogen (clone 4C4.9). No special pretreatment is required for IHC staining of formalin-paraffin tissues.



Immunofluorescence testing of A2058 cells and Alexa Fluor 488 labeled S100B antibody (clone 4C4.9).



SDS-PAGE analysis of purified, BSA-free S100B antibody (clone 4C4.9) as confirmation of integrity and purity.

Description

S100B antibody is used to investigate the calcium binding protein S100B, a multifunctional member of the S100 family. The protein is highly expressed in astrocytes of the central nervous system and is also present in melanocytes, adipocytes, and chondrocytes. S100B influences cytoskeletal organization, enzyme activity, and intracellular signaling, while also functioning extracellularly as a paracrine factor. Because of these wide ranging roles, it has become an important focus in neuroscience, oncology, and inflammation research.

S100B interacts with target proteins in a calcium dependent manner, using EF hand motifs to bind calcium and undergo conformational shifts. These changes expose binding surfaces that allow S100B to regulate microtubule stability, protein phosphorylation, and transcription. When secreted, S100B can interact with receptors such as RAGE, modulating inflammatory and survival pathways. Its context dependent effects include promoting cell survival at low concentrations and inducing apoptosis or inflammation at higher levels.

The S100B antibody clone 4C4.9 has been extensively validated for its specificity and reproducibility. Clone 4C4.9 has been employed to study astrocyte reactivity, neurodegeneration, and the role of S100B in brain injury. It has also supported melanoma research, where S100B expression correlates with tumor progression and prognosis. The reliability of clone 4C4.9 makes it a standard choice for studies of this calcium binding protein.

Elevated S100B levels are associated with neurological conditions including Alzheimer disease, Parkinson disease, and traumatic brain injury. In oncology, S100B serves as a biomarker for melanoma and is linked to tumor aggressiveness. Research using clone 4C4.9 has been instrumental in clarifying these associations and guiding the use of S100B as both a diagnostic marker and a therapeutic target. Beyond pathology, the protein has been studied in normal physiology where it contributes to astrocytic support of neurons.

NSJ Bioreagents supplies this S100B antibody to facilitate investigations into brain health, cancer, and immune regulation. Researchers may also encounter the protein under alternate names including S100 calcium binding protein B

antibody, astrocytic marker antibody, protein S100 beta chain antibody, and NEF antibody. These reflect the broad utility of S100B across research disciplines.

Application Notes

The concentration stated for each application is a general starting point. Variations in protocols, secondaries and substrates may require the S100B antibody to be titered up or down for optimal performance.

Immunogen

Purified bovine brain S100 protein was used as the immunogen for this S100B antibody.

Storage

Store the S100B antibody at 2-8oC (with azide) or aliquot and store at -20oC or colder (without azide).