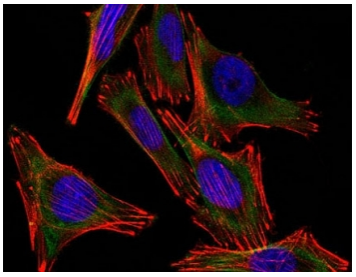
S100B Antibody Cocktail [clone 4C4.9 + S100B/1012] (V3423)

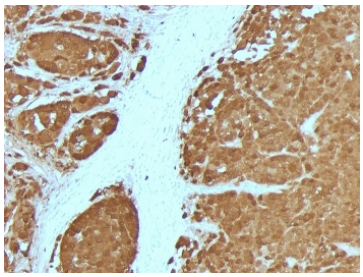
Catalog No.	Formulation	Size
V3423-100UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	100 ug
V3423-20UG	0.2 mg/ml in 1X PBS with 0.1 mg/ml BSA (US sourced) and 0.05% sodium azide	20 ug
V3423SAF-100UG	1 mg/ml in 1X PBS; BSA free, sodium azide free	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Purified
Host	Mouse
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	4C4.9 + 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 S100B antibody cocktail is available for research use only.



(Left) Confocal Immunofluorescent analysis of A2058 cells using AF488-labeled S100 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 melanoma with S100B antibody (4C4.9 + S100B/1012). Required HIER: boiling tissue sections in pH 9 10mM Tris with 1mM EDTA for 10-20 min followed by cooling at RT for 20 min.

Description

S100B antibody is an important reagent for studying the multifunctional calcium binding protein S100B. This member of the S100 family is highly expressed in astrocytes of the central nervous system, but it is also present in melanocytes, adipocytes, and chondrocytes. S100B contributes to cytoskeletal dynamics, enzyme regulation, and calcium homeostasis. Extracellularly, it functions as a signaling molecule, influencing inflammation and cell survival through receptor interactions. Because of its widespread roles, S100B has become a focal point in neuroscience, oncology, and immune regulation.

S100B contains EF hand domains that allow it to bind calcium, producing conformational changes that enable interaction with diverse targets. Inside the cell, S100B regulates cytoskeletal proteins, kinases, and transcription factors. When secreted, it can bind to receptors such as RAGE, promoting context dependent effects ranging from cell growth at low concentrations to apoptosis and inflammatory activation at higher levels. This dual role as both intracellular regulator and extracellular signal makes S100B biologically versatile.

The S100B antibody clones 4C4.9 and S100B/1012 provide consistent and reliable detection of this protein. Clone 4C4.9 has long been recognized as a benchmark for S100B research, while clone S100B/1012 adds additional utility by confirming findings across different experimental approaches. Together, these clones have been applied in studies of astrocyte activation, brain injury, neurodegeneration, and melanoma progression. Their reproducible performance has made them widely used in both basic and translational research.

Elevated S100B levels are strongly associated with neurological conditions including Alzheimer disease, Parkinson disease, traumatic brain injury, and amyotrophic lateral sclerosis. In oncology, S100B serves as a diagnostic marker for melanoma and has been linked to prognosis and disease stage. Research using clones 4C4.9 and S100B/1012 continues to shed light on how altered S100B expression influences pathology and therapeutic outcomes.

NSJ Bioreagents offers this S100B antibody combination to support high quality research across multiple fields. Scientists may also find the protein referenced as S100 calcium binding protein B antibody, astrocyte marker antibody, protein S100 beta chain antibody, and NEF antibody. These alternate terms highlight the diverse contexts in which S100B is studied.

Application Notes

Optimal dilution of the S100B antibody cocktail should be determined by the researcher.

Immunogen

Purified bovine brain S100 protein (4C4.9) and recombinant full-length human protein (S100B/1012) were used as the immunogen for the S100 antibody cocktail.

Storage

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