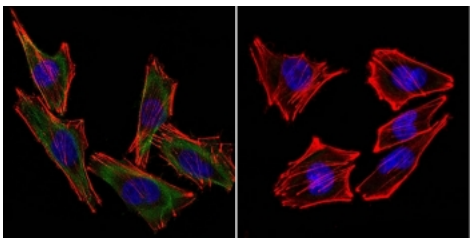
S100B Antibody / S100 beta [clone S100B/1012] (V3505CF488)

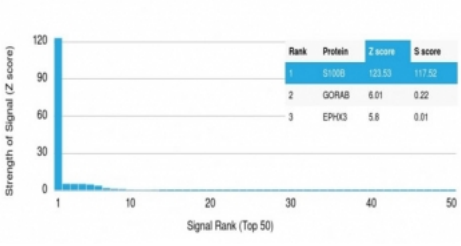
Catalog No.	Formulation	Size
V3505CF488-100T	500 ul at 0.1 mg/ml with 0.1 mg/ml BSA (US sourced), 0.05% sodium azide	100 Tests

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	CF488 Conjugate
Clonality	Monoclonal (mouse origin)
Isotype	Mouse IgG2a, kappa
Clone Name	S100B/1012
Purity	Protein G affinity chromatography
UniProt	P04271
Applications	Immunofluorescence : 1-2ug/ml
Limitations	This S100B antibody is available for research use only.



(Left) Confocal Immunofluorescent analysis of A2058 cells using 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.



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.

Description

S100B antibody CF488 conjugate is designed for fluorescence based research involving the calcium binding protein S100B. This member of the S100 family is abundant in astrocytes and is also expressed in melanocytes, adipocytes, and chondrocytes. S100B regulates intracellular processes such as microtubule stability and enzyme activity, while also functioning as an extracellular signal that modulates inflammation and survival through receptors like RAGE. Its diverse functions make S100B central to research in neurology, oncology, and inflammation.

As a calcium binding protein, S100B responds to fluctuations in intracellular calcium by undergoing conformational changes that facilitate binding to target molecules. This regulation extends to cytoskeletal proteins, transcription factors, and kinases, integrating S100B into signaling networks that control growth and stress responses. When secreted, S100B influences neighboring cells in a concentration dependent manner, promoting growth at low levels and inducing apoptosis or inflammation at higher levels.

The S100B antibody CF488 conjugate clone S100B/1012 provides bright green fluorescence for direct visualization. By eliminating the need for secondary antibodies, the conjugate reduces background and improves signal clarity. Clone S100B/1012 has been validated in studies of astrocyte activation, neurodegeneration, and melanoma, where clear fluorescent labeling allows precise mapping of S100B expression. Its consistent performance makes it well suited for multiplex experiments and imaging applications.

S100B is studied extensively as a biomarker for brain injury and neurodegenerative disease, where elevated levels indicate astrocytic stress or damage. In melanoma, overexpression of S100B correlates with tumor stage and prognosis. The CF488 conjugate enables researchers to track these patterns with high sensitivity in complex tissues, making it a valuable addition to both basic and translational research.

NSJ Bioreagents provides this S100B antibody CF488 conjugate to support imaging based investigations into brain function, tumor biology, and inflammation. Alternate terms for this protein include S100 calcium binding protein B antibody, astrocytic marker antibody, protein S100 beta chain antibody, and NEF antibody, reflecting the range of nomenclature used in the literature.

Application Notes

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

Immunogen

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

Storage

Store the S100B antibody at 2-8oC, protected from light.