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Anti-S100B Antibody

Mouse Monoclonal Antibody
Catalog # AH13495

Product Information

Application	WB, IHC-P, IF, FC
Primary Accession	P04271
Other Accession	422181
Reactivity	Human, Mouse, Rat
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG2a, kappa
Clone Names	4C4.9
Calculated MW	10713

Additional Information

Gene ID	6285
Other Names	NEF; Protein S100-B; S-100 protein beta chain; S100 calcium binding protein beta (neural); S100 calcium-binding protein B; S100 protein beta chain; S100B; S100beta
Application Note	Flow Cytometry (0.5-1ug/million cells); Immunofluorescence (1-2ug/ml); ,Western Blotting (0.5-1ug/ml),Immunohistology (Formalin-fixed) (0.25-0.5ug/ml for 30 minutes at RT),(Staining of formalin-fixed tissues requires boiling tissue sections in 10mM citrate buffer, pH 6.0, for 10-20 min followed by cooling at RT for 20 minutes),Optimal dilution for a specific application should be determined.
Format	200ug/ml of Ab purified from Bioreactor Concentrate by Protein A/G. Prepared in 10mM PBS with 0.05% BSA & 0.05% azide. Also available WITHOUT BSA & azide at 1.0mg/ml.
Storage	Store at 2 to 8°C.Antibody is stable for 24 months.
Precautions	Anti-S100B Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

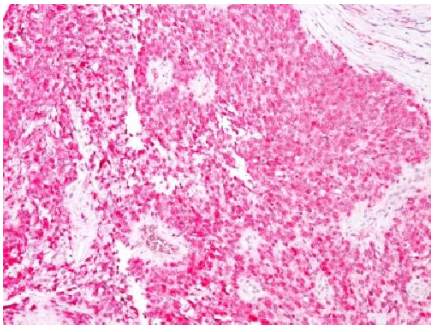
Name	S100B {ECO:0000303|PubMed:6487634, ECO:0000312|HGNC:HGNC:10500}
Function	Small zinc- and- and calcium-binding protein that is highly expressed in astrocytes and constitutes one of the most abundant soluble proteins in brain (PubMed:20950652, PubMed:6487634). Weakly binds calcium but binds zinc

	very tightly-distinct binding sites with different affinities exist for both ions on each monomer (PubMed:20950652, PubMed:6487634). Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites (By similarity). Acts as a neurotrophic factor that promotes astrocytosis and axonal proliferation (By similarity). Involved in innervation of thermogenic adipose tissue by acting as an adipocyte-derived neurotrophic factor that promotes sympathetic innervation of adipose tissue (By similarity). Binds to and initiates the activation of STK38 by releasing autoinhibitory intramolecular interactions within the kinase (By similarity). Interaction with AGER after myocardial infarction may play a role in myocyte apoptosis by activating ERK1/2 and p53/TP53 signaling (By similarity). Could assist ATAD3A cytoplasmic processing, preventing aggregation and favoring mitochondrial localization (PubMed:20351179). May mediate calcium-dependent regulation on many physiological processes by interacting with other proteins, such as TPR-containing proteins, and modulating their activity (PubMed:22399290).
Cellular Location	Cytoplasm. Nucleus. Secreted {ECO:0000250|UniProtKB:P50114} Note=Secretion into the medium is promoted by interaction with isoform CLSTN3beta of CLSTN3. {ECO:0000250|UniProtKB:P50114}
Tissue Location	Although predominant among the water-soluble brain proteins, S100 is also found in a variety of other tissues

Background

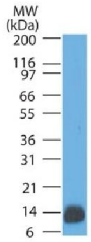
S100 belongs to the family of calcium binding proteins. S100A and S100B proteins are two members of the S100 family. S100A is composed of an alpha and a beta chain whereas S100B is composed of two beta chains. This antibody is specific against an epitope located on the beta-chain (i.e. in S-100A and S-100B) but not on the alpha-chain of S-100 (i.e. in S-100A and S100A0). This antibody can be used to localize S-100A and S-100B in various tissue sections. S-100 protein has been found in normal melanocytes, Langerhans cells, histiocytes, chondrocytes, lipocytes, skeletal and cardiac muscle, Schwann cells, epithelial and myoepithelial cells of the breast, salivary and sweat glands, as well as in glial cells. Neoplasms derived from these cells also express S-100 protein, albeit non-uniformly. A large number of well-differentiated tumors of the salivary gland, adipose and cartilaginous tissue, and Schwann cell-derived tumors express S-100 protein. Almost all malignant melanomas and cases of histiocytosis X are positive for S-100 protein.

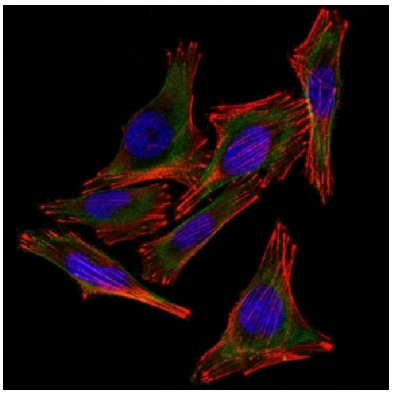
Images



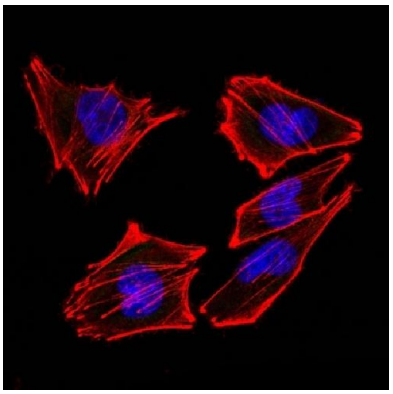
Formalin-fixed, paraffin-embedded human Melanoma stained with S100B Mouse Monoclonal Antibody (4C4.9) (AEC Chromogen)

Western blot analysis of human brain lysate using S100B Mouse Monoclonal Antibody (4C4.9).





Confocal Immunofluorescent analysis of A2058 cells using AF488-labeled S100B Monoclonal Antibody (4C4.9) (Green). F-actin filaments were labeled with DyLight 554 Phalloidin (red). DAPI was used to stain the cell nuclei (blue).



Confocal Immunofluorescent analysis of A2058 cells using AF488-labeled Isotype Control Monoclonal Antibody (IgG2a) (Green). F-actin filaments were labeled with DyLight 554 Phalloidin (red). DAPI was used to stain the cell nuclei (blue). (Negative Control)

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.