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Anti-S100A Antibody

Mouse Monoclonal Antibody
Catalog # AH13488

Product Information

Application	IHC-P, IF
Primary Accession	P23297
Other Accession	515715
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	Mouse / IgG1, kappa
Clone Names	S1/61
Calculated MW	10546

Additional Information

Gene ID	6271
Other Names	Bpb; NEF; S100-A1; S100 Alpha Chain; S100 Beta Chain; S100 Calcium Binding Protein A1; S100 Calcium Binding Protein B; S100 Calcium Binding Protein Beta Neural
Application Note	Immunofluorescence (1-2ug/ml); ,Immunohistology (Formalin-fixed) (1-2ug/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-S100A Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

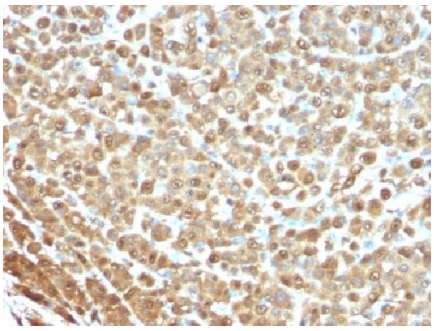
Name	S100A1
Synonyms	S100A
Function	Small calcium binding protein that plays important roles in several biological processes such as Ca(2+) homeostasis, chondrocyte biology and

	cardiomyocyte regulation (PubMed:12804600). In response to an increase in intracellular Ca(2+) levels, binds calcium which triggers conformational changes (PubMed:23351007). These changes allow interactions with specific target proteins and modulate their activity (PubMed:22399290). Regulates a network in cardiomyocytes controlling sarcoplasmic reticulum Ca(2+) cycling and mitochondrial function through interaction with the ryanodine receptors RYR1 and RYR2, sarcoplasmic reticulum Ca(2+)-ATPase/ATP2A2 and mitochondrial F1-ATPase (PubMed:12804600). Facilitates diastolic Ca(2+) dissociation and myofilament mechanics in order to improve relaxation during diastole (PubMed:11717446).
Cellular Location	Cytoplasm. Sarcoplasmic reticulum. Mitochondrion {ECO:0000250|UniProtKB:P56565}
Tissue Location	Highly prevalent in heart (PubMed:12804600, PubMed:1384693). Also found in lesser quantities in skeletal muscle and brain (PubMed:1384693).

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 alpha-chain (i.e. in S-100A and S-100B) but not on the beta-chain of S-100 (i.e. in S-100B). This antibody can be used to localize S-100A in various tissue sections. S-100 protein has been found in normal melanocytes, Langerhans cells, histiocytes, chondrocytes, lipocytes, skeletal and cardiac muscle, epithelial and myoepithelial cells of the breast, salivary and sweat glands. Neoplasms derived from these cells also 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 S100A Mouse Monoclonal Antibody (S1/61)