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Anti-S100-A1 Antibody

Catalog # AP51496

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P23297
Reactivity	Human, Mouse, Rat, Bovine, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	10546

Additional Information

Gene ID	6271
Other Names	S100A; Protein S100-A1; S-100 protein alpha chain; S-100 protein subunit alpha; S100 calcium-binding protein A1
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human S100-A1. The exact sequence is proprietary.
Dilution	WB~~ 1:1000 IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

Protein Information

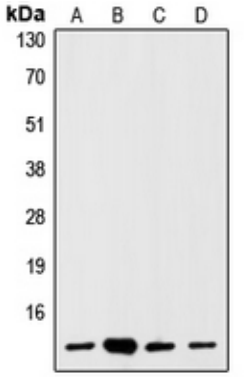
Name	S100A1
Synonyms	S100A
Function	Small calcium binding protein that plays important roles in several biological processes such as Ca(2+) homeostasis, chondrocyte biology and cardiomyocyte regulation (PubMed:12804600). In response to an increase in intracellular Ca(2+) levels, binds calcium which triggers 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).

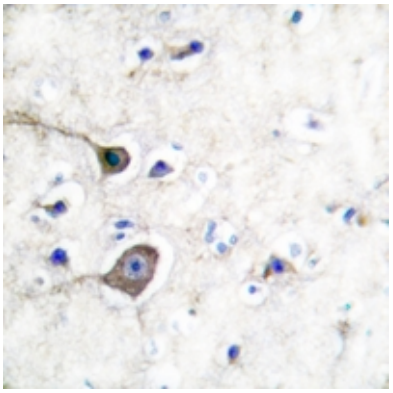
References

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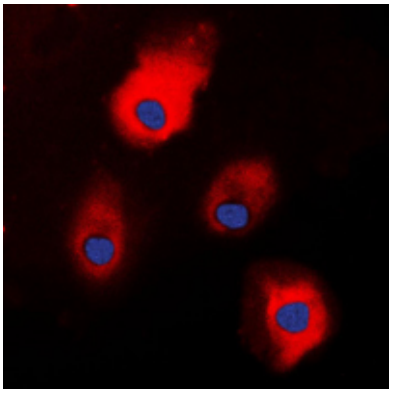
Images



Western blot analysis of S100-A1 expression in HEK293T (A), mouse brain (B), rat brain (C), C6 (D) whole cell lysates. (Predicted band size: 10 kD; Observed band size: 11 kD)



Immunohistochemical analysis of S100-A1 staining in human brain formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of S100-A1 staining in HEK293T cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a humidified chamber. Cells were washed with PBST and incubated with a DyLight 594-conjugated secondary antibody (red) in PBS at room temperature in the dark. DAPI was used to stain the cell nuclei (blue).

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