

S100-A1 Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP51496

Product Information

Application	WB
Primary Accession	P23297
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	10546

Additional Information

Gene ID	6271
Other Names	Protein S100-A1, S-100 protein alpha chain, S-100 protein subunit alpha, S100 calcium-binding protein A1, S100A1, S100A
Target/Specificity	KLH conjugated synthetic peptide derived from human S100-A1
Dilution	WB~~ 1:1000
Format	0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%
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

Tissue Location

Highly prevalent in heart (PubMed:12804600, PubMed:1384693). Also found in lesser quantities in skeletal muscle and brain (PubMed:1384693).

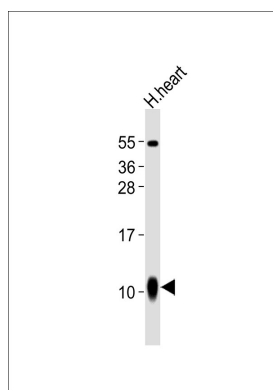
Background

Weakly binds calcium but binds zinc very tightly- distinct binding sites with different affinities exist for both ions on each monomer. Physiological concentrations of potassium ion antagonize the binding of both divalent cations, especially affecting high-affinity calcium-binding sites. May mediate calcium-dependent regulation on many physiological processes by interacting with other proteins, such as TPR-containing proteins, and modulating their activity.

References

Engelkamp D.,et al.Biochemistry 31:10258-10264(1992).
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Kalnine N.,et al.Submitted (OCT-2004) to the EMBL/GenBank/DDBJ databases.
Goshima N.,et al.Nat. Methods 5:1011-1017(2008).
Gregory S.G.,et al.Nature 441:315-321(2006).

Images



Anti-S100-A1 Antibody at 1:1000 dilution + human heart lysates. Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 11 kDa. Blocking/Dilution buffer: 5% NFDM/TBST.

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