

S100-A1 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51496**Specification**

S100-A1 Antibody - Product Information

Application	WB
Primary Accession	P23297
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Calculated MW	11 KDa
Antigen Region	21 - 80

S100-A1 Antibody - 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

S100-A1 Antibody - 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

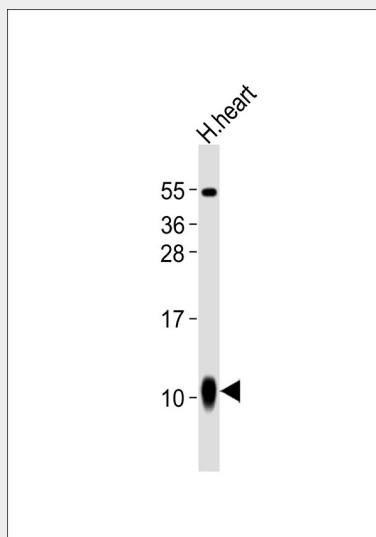
Highly prevalent in heart (PubMed:12804600, PubMed:1384693). Also found in lesser quantities in skeletal muscle and brain (PubMed:1384693).

S100-A1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

S100-A1 Antibody - 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.

S100-A1 Antibody - 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.

S100-A1 Antibody - 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).