

# S100 alpha Antibody

Rabbit mAb

Catalog # AP92819

## Product Information

<b>Application</b>	WB, IHC
<b>Primary Accession</b>	<a href="#">P23297</a>
<b>Reactivity</b>	Rat, Human, Mouse
<b>Clonality</b>	Monoclonal
<b>Other Names</b>	Bpb; NEF; S100 alpha; S100; S100 Beta Chain; S100A; s100a1;
<b>Isotype</b>	Rabbit IgG
<b>Host</b>	Rabbit
<b>Calculated MW</b>	10546

## Additional Information

<b>Dilution</b>	WB 1:500~1:2000 IHC 1:50~1:200
<b>Purification</b>	Affinity-chromatography
<b>Immunogen</b>	A synthesized peptide derived from human S100 alpha
<b>Description</b>	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.
<b>Storage Condition and Buffer</b>	Rabbit IgG in phosphate buffered saline , pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at +4°C short term. Store at -20°C long term. Avoid freeze / thaw cycle.

## Protein Information

<b>Name</b>	S100A1
<b>Synonyms</b>	S100A
<b>Function</b>	Small calcium binding protein that plays important roles in several biological processes such as Ca(2+) homeostasis, chondrocyte biology and cardiomyocyte regulation (PubMed: <a href="#">12804600</a> ). In response to an increase in intracellular Ca(2+) levels, binds calcium which triggers conformational changes (PubMed: <a href="#">23351007</a> ). These changes allow interactions with specific target proteins and modulate their activity (PubMed: <a href="#">22399290</a> ). 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: <a href="#">12804600</a> ). Facilitates diastolic Ca(2+) dissociation and myofilament mechanics in order to improve relaxation during diastole (PubMed: <a href="#">11717446</a> ).

**Cellular Location**

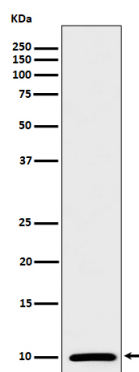
Cytoplasm. Sarcoplasmic reticulum. Mitochondrion  
{ECO:0000250|UniProtKB:P56565}

**Tissue Location**

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

**Images**

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Western blot analysis of S100 alpha expression in mouse heart lysate.

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