

# Mouse S100A1 Protein (His Tag)

Catalog Number: 50266-M07E



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

AI266795; S100; S100a

### Protein Construction:

A DNA sequence encoding the mouse S100A1 (P56565) (Gly 2-Ser 94) was expressed, with a polyhistidine tag at the N-terminus.

**Source:** Mouse

**Expression Host:** E. coli

## QC Testing

**Purity:** > 95 % as determined by SDS-PAGE

### Bio Activity:

Measured by its ability to bind human AGER in a functional ELISA.

### Endotoxin:

Please contact us for more information.

### Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

**Predicted N terminal:** Met

### Molecular Mass:

The recombinant mouse S100A1 consisting of 109 amino acids and has a calculated molecular mass of 12.5 kDa. rmS100A1 migrates as an approximately 14 kDa band in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile PBS, pH 7.5

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

## Usage Guide

### Storage:

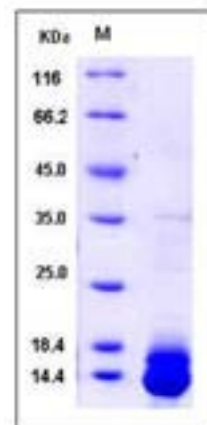
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**Avoid repeated freeze-thaw cycles.**

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

S100A1 is a Ca<sup>2+</sup>-binding protein of the EF-hand type that belongs to the S100 protein family. S100 proteins consisting of at least 19 members exist as dimers in the cytoplasm and/or nucleus of a wide range of cells, and are involved in the regulation of a number of cellular processes such as cell-cycle progression and cell differentiation. This protein has been shown to function in the processes including stimulation of Ca<sup>2+</sup>-induced Ca<sup>2+</sup> release, inhibition of microtubule assembly, and inhibition of PKC-mediated phosphorylation. Phosphoglucomutase is a target protein whose activity is antagonistically regulated by S100A1, and recently, S100A1 is also identified as a potent molecular chaperone and a new member of the Hsp70/Hsp90 multichaperone complex. S100A1 displays a tissue-specific expression pattern with highest levels in myocardium and is considered to be an important regulator of cardiac contractility. Accordingly, reduced expression or mutations of S100A1 gene have been implicated in cardiomyopathies.

## References

1. Remppis, A. et al., 1996, Biochim. Biophys. Acta. 1313: 253-257.
2. Most, P. et al., 2001, Proc. Natl. Acad. Sci. U.S.A. 98: 13889-13894.
3. Okada, M. et al., 2004, J. Biol. Chem. 279: 4221-4233.

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