

# Human S100A1 Protein (Fc Tag)

Catalog Number: 10179-H01H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

S100; S100-alpha; S100A

### Protein Construction:

A DNA sequence encoding the human S100A1 (NP\_006262.1) (Gly 2-Ser94) was expressed with the N-terminal fused Fc region of human IgG1.

**Source:** Human

**Expression Host:** HEK293 Cells

## QC Testing

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

### Bio Activity:

**Measured by its ability to bind biotinylated Human Fc-S100B (cat: 10181-H01H) in functional Elisa.**

### Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

### Stability:

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

**Predicted N terminal:** Glu 20

### Molecular Mass:

The recombinant human Fc/S100A1 is a disulfide-linked homodimeric protein. The reduced monomer consists of 330 amino acids and has a predicted molecular mass of 37.1 kDa. As a result of glycosylation, the apparent molecular mass of rhFc/S100A1 monomer is approximately 40 kDa in SDS-PAGE under reducing conditions.

### Formulation:

Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, 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:

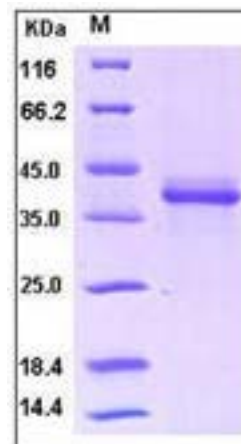
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

**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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