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# Recombinant Mouse S100A1 Protein (His Tag)

Catalog Number: PDEM100208

Note: Centrifuge before opening to ensure complete recovery of vial contents.

#### Description

**Species** Mouse

Source E.coli-derived Mouse S100A1 protein Gly2-Ser94, with an N-terminal His

Calculated MW 12.5 kDa
Observed MW 14 kDa
Accession P56565

**Bio-activity** Not validated for activity

#### **Properties**

**Purity** > 95% as determined by reducing SDS-PAGE.

**Endotoxin** < 10 EU/mg of the protein as determined by the LAL method

Storage Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80

°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of

reconstituted samples are stable at < -20°C for 3 months.

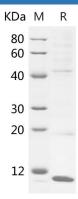
ShippingThis product is provided as lyophilized powder which is shipped with ice packs.FormulationLyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5%

Mannitol.

**Reconstitution** It is recommended that sterile water be added to the vial to prepare a stock solution of

0.5 mg/mL. Concentration is measured by UV-Vis.

## Data



> 95 % as determined by reducing SDS-PAGE.

## Background

S100A1 is a Ca2+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 Ca2+-induced Ca2+ 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.

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