

Human S100A1 Protein

Catalog Number: 10179-HNAE



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) (Met 1-Ser 94) was expressed.

Source: Human

Expression Host: E. coli

QC Testing

Purity: > 97 % as determined by SDS-PAGE

Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized recombinant human Fc-S100B (Cat:10181-H01H) at 10 µg/mL (100 µl/well) can bind biotinylated human S100A1 (Cat:10179-HNAE) with a linear range of 15.6-250 ng/mL. 3. Measured by its ability to bind human His-S100B (Cat:10181-H07E) in 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 1

Molecular Mass:

The recombinant human S100A1 consists of 94 amino acids and has a predicted molecular mass of 10.5 kDa.

Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

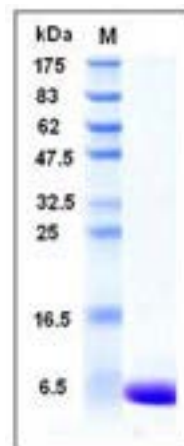
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

S100A1 is a 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.

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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