Data Sheet (Cat.No.TMPY-00997)

TargetMol

S100A1 Protein, Human, Recombinant

General Information

Synonyms:	S100-α;S100A;S100 calcium binding protein A1;S100;S100-alpha
Protein Construction:	A DNA sequence encoding the human S100A1 (NP_006262.1) (Met 1-Ser 94) was expressed. Predicted N terminal: Met 1
Species:	Human
Expression Host:	E. coli
Accession:	P23297
Molecular Weight:	10.5 kDa (predicted)

QC Testing

Biological Activity:	1. Measured by its binding ability in a functional ELISA. 2. Immobilized recombinant human Fc-S100B at 10 μg/mL (100 μl/well) can bind biotinylated human S100A1 with a linear range of 15.6-250 ng/mL. 3. Measured by its ability to bind human His-S100B in functional ELISA.
Purity:	> 97 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Shipping:

In general, Lyophilized powders are shipping with blue ice.

Protein 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.

Reference

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Schafer, W.E. et al., 1995, Genomics. 25: 638-643.
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