

Recombinant Human S100A1 Protein (Fc Tag)

Catalog No. PKSH031793

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

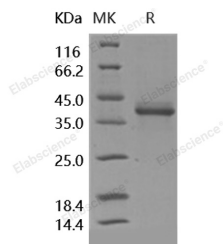
Description

Synonyms	S100;S100-alpha;S100A
Species	Human
Expression Host	HEK293 Cells
Sequence	Gly 2-Ser94
Accession	NP_006262.1
Calculated Molecular Weight	37.1 kDa
Observed molecular weight	40 kDa
Tag	N-hFc
Bioactivity	Measured by its ability to bind biotinylated Human Fc-S100B in functional Elisa.

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per µg 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.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
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. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

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

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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^{2+} -induced Ca^{2+} 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.