

S100A1 Protein, Human, Recombinant (His)

General Information

Synonyms:	S100;S100 calcium-binding protein A1;S-100 protein alpha chain;Protein S100-A1;S-100 protein alpha subunit;S100A1;S100-A1;S100A;S100-alpha
Protein Construction:	Met1-Ser94
Species:	Human
Expression Host:	E. coli
Accession:	P23297
Molecular Weight:	~11.5 kDa (Reducing conditions)

QC Testing

Biological Activity:	Activity has not been tested. It is theoretically active, but we cannot guarantee it.
Purity:	> 95% as determined by SDS-PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized after extensive dialysis against 20 mM Tris-HCl, 0.1 mM EDTA, pH 7.0.

Preparation and Storage

Reconstitution:

It is recommended that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Reconstitute the lyophilized powder in ddH₂O at 200 μg/ml.

Stability & Storage:

Upon receiving, this product remains stable for up to 6 months at lower than -70°C. Upon reconstitution, the product should be stable for up to 1 week at 4°C or up to 3 months at -20°C. For long term storage it is recommended that a carrier protein (example 0.1% BSA) be added. Avoid repeated freeze-thaw cycles.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

S100 calcium-binding protein A1 (S100A1) is a small calcium binding protein with EF-hand structures and belongs to the S100 family. S100 proteins include at least 25 members which are located as a cluster on human chromosome 1q21. S100A1 is found in the heart, skeletal muscle, brain, and kidney. S100A1 mainly resides on the sarcoplasmic reticulum, mitochondria and myofilaments. S100A1 may function in stimulation of Ca²⁺ induced Ca²⁺ release, inhibition of microtubule assembly, and inhibition of protein kinase C-mediated phosphorylation. Reduced expression of this protein has been implicated in cardiomyopathies.

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