

S100A13 Protein, Mouse, Recombinant (His)

General Information

Synonyms:	S100 calcium binding protein A13;S100A13
Protein Construction:	A DNA sequence encoding the mouse S100A13 (P97352) (Met1-Lys98) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: Met
Species:	Mouse
Expression Host:	E. coli
Accession:	P97352
Molecular Weight:	14.3 kDa (predicted); 15 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % 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, 10% glycerol, 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.

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 protein is a family of low molecular weight protein found in vertebrates characterized by two EF-hand calcium-binding motifs. There are at least 21 different S100 proteins, and the name is derived from the fact that the protein is 100% soluble in ammonium sulfate at neutral pH. Most S100 proteins are disulfide-linked homodimer, and is normally present in cells derived from the neural crest, chondrocytes, macrophages, dendritic cells, etc. S100 proteins have been implicated in a variety of intracellular and extracellular functions. They are

involved in regulation of protein phosphorylation, transcription factors, the dynamics of cytoskeleton constituents, enzyme activities, cell growth and differentiation, and the inflammatory response. Protein S100-A13, also known as S100 calciumbinding protein A13, is a member of the S-100 family. It contains two EF-hand domains. S100A13 binds two calcium ions per subunit and one copper ion. Binding of one copper ion does not interfere with calcium-binding. S100A13 is required for the copper-dependent stress-induced export of IL1A and FGF1. The calcium-free protein binds to lipid vesicles containing phosphatidylserine, but not to vesicles containing phosphatidylcholine. S100A13 plays a role in the export of proteins that lack a signal peptide and are secreted by an alternative pathway.

Reference

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Viemann D. et al., 2005, Blood. 105: 2955-62.
Nakatani Y. et al., 2005, Mediators Inflamm. 2005: 280-92.
Bjoerk P. et al., 2009, PLoS Biol. 7: E97-E97.

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