

## S100A4 Protein, Human, Recombinant (His)

### General Information

Synonyms:	42A;18A2;PEL98;CAPL;MTS1;S100 calcium binding protein A4;P9KA
Protein Construction:	A DNA sequence encoding the human S100A4 (NP_002952.1) (Met1-Lys101) was expressed with a polyhistidine tag at the C-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	E. coli
Accession:	P26447
Molecular Weight:	12.6 kDa (predicted); 13 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:	> 95 % 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. <small>Actual storage temperature shall be subject to the COA.</small>
Shipping:	In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

### Protein Background

S100A4, also known as metastasis-associated protein Mts1, belongs to the family of small calcium-binding S100 proteins containing two EF-hand calcium-binding motifs. In humans at least 20 S100 family members that are distributed tissue specifically have been identified, and are involved in a number of cellular processes as transducers of calcium signal. S100A4 is a symmetric homodimer, and undergoes a relatively large conformational change upon the typical EF-hand binding calcium, which is necessary for S100A4 to interact with

its protein targets and generate biological effects. It can bind the already known targets p53, F-actin, liprin  $\beta$ , myosin heavy chain II, and prevent their phosphorylation and multimerization. It has been demonstrated that S100A4 is directly involved in tumor metastasis including cell motility, invasion, apoptosis, angiogenesis and differentiation, and appears to be a metastasis factor and a molecular marker for clinical prognosis. Multiple alternatively spliced variants encoding the same protein have been identified.

### Reference

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