



## S100A11 Human E. coli

### Product Data Sheet

**Type:** Recombinant

**Source:** E. coli

**Species:** Human

**Other names:** S100 calcium-binding protein A11, Protein S100-C, Calgizzarin Metastatic lymph node gene 70 protein, MLN70, S100C

**Cat. No.:**

RD172220100 (0.1 mg)

### Description

Total 115 AA. MW: 12,98 kDa (calculated). N-Terminal His-tag, 10 extra AA (highlighted).

### Introduction to the Molecule

S100A11 (S100C; calgizzarin) was first isolated from chicken gizzard smooth muscle. A human homologue was later identified in human colorectal cancer cells and in colorectal normal mucosa, with much higher expression than in the cancer cells. S100A11 is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. The polypeptide chain contains 105 amino acid residues giving molecular weight of unmodified monomeric protein 11.74 kDa. Disulphide bridge linking two monomers in the dimer via Cys-11 residues was found in its structure. The protein can be phosphorylated on some residues from which at least phosphorylation on Thr-10 causes significant structural changes. S100A11 binds to annexins A1 and A2, the DNA-dependent ATPase Rad54B, p53 and RAGE. It was proposed that up-regulated chondrocyte expression of S100A11 (as RAGE ligand) in OA cartilage and RAGE signaling through the p38 MAPK pathway promote inflammation-associated chondrocyte hypertrophy. RAGE signaling mediated by S100A11 thereby might have the potential to contribute to the progression of OA. S100A11 is also secreted and exerts RAGE dependent signaling in human keratinocytes. S100A11 is present in many different human both normal and cancer tissues. S100A11 appears to have distinct features depending on the tumour involved. In bladder carcinoma or renal carcinoma this expression is related to tumour suppression. However S100A11 is a tumour promoter in prostate cancer, breast and pancreatic cancer. S100A11 is also one of the potential biomarkers of infective endocarditis.

### Research topic

Cardiovascular disease, Immune Response, Infection and Inflammation, Oncology, Others

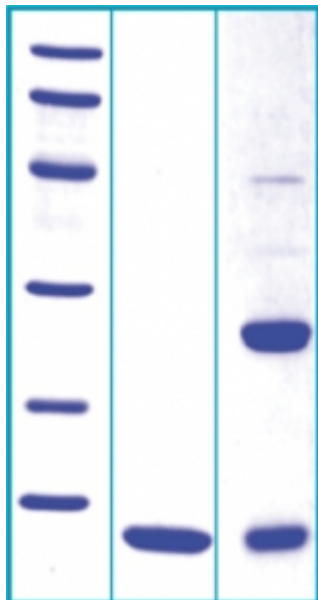
### Amino Acid Sequence

**MKHHHHH**AS MAKISSPTET ERCIESLIAV FQKYAGKDG Y NYTL SKTEFL SFMNT ELAAF TKNQKDPGVL DRMMKKLDTN  
SDGQLDFSEF LNLIGGLAMA CHDSFLKAVP SQKRT

### Source

E. coli

## SDS-PAGE gel



14% SDS-PAGE separation of Human S100A11 protein

1. M.W. marker - 14, 21, 31, 45, 66, 97 kDa

2. reduced and heated sample, 5µg / lane

3. non-reduced and non-heated sample, 5µg / lane

## Formulation

Filtered (0,4 µm) and lyophilized in 0.5 mg/mL in 20mM TRIS, 50mM NaCl, pH 7.5

## Reconstitution

Add deionized water to prepare a working stock solution of approximately 0.5 mg/mL and let the lyophilized pellet dissolve completely. Product is not sterile! Please filter the product by an appropriate sterile filter before using it in the cell culture.

## Shipping

At ambient temperature. Upon receipt, store the product at the temperature recommended below.

## Storage, Stability/Shelf Life

Store lyophilized protein at -20°C. Lyophilized protein remains stable until the expiry date when stored at -20°C. Aliquot reconstituted protein to avoid repeated freezing/thawing cycles and store at -80°C for long term storage. Reconstituted protein can be stored at 4°C for a limited period of time; it does not show any change after one week at 4°C.

## Quality Control Test

BCA to determine quantity of the protein.

SDS PAGE to determine purity of the protein.

## Applications

Western blotting

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