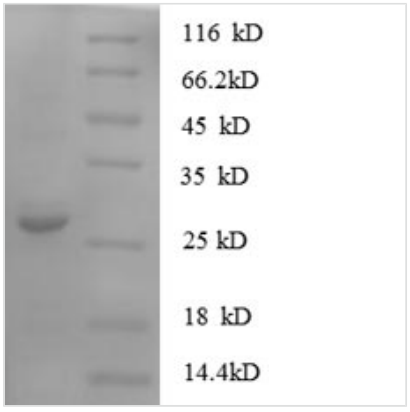
Recombinant Human Protein S100-A11 (S100A11)

Product Code	CSB-EP020624HU
Relevance	Facilitates the differentiation and the cornification of keratinocytes.
Abbreviation	Recombinant Human S100A11 protein
Storage	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.
Uniprot No.	P31949
Alias	Calgizzarin;Metastatic lymph node gene 70 protein ;MLN 70Protein S100-CS100 calcium-binding protein A11
Product Type	Recombinant Protein
Immunogen Species	Homo sapiens (Human)
Purity	Greater than 90% as determined by SDS-PAGE.
Sequence	AKISSPTETERCIESLIAVFQKYAGKDGYNYTLSKTEFLSFMNTELAAFTKNQKD PGVLDRMMKKLDTNSDGQLDFSEFLNLIGGLAMACHDSFLKAVPSQKRT
Research Area	Signal Transduction
Source	E.coli
Target Names	S100A11
Expression Region	2-105aa
Notes	Repeated freezing and thawing is not recommended. Store working aliquots at 4°C for up to one week.
Tag Info	N-terminal 6xHis-SUMO-tagged
Mol. Weight	27.6kDa
Protein Length	Full Length of Mature Protein

Image



(Tris-Glycine gel) Discontinuous SDS-PAGE (reduced) with 5% enrichment gel and 15% separation gel.

Description

Recombinant Human Protein S100-A11 (S100A11) gets expressed in E. coli and spans the full length of the mature protein from amino acids 2 to 105. The protein carries an N-terminal 6xHis-SUMO tag to help with purification and detection. SDS-PAGE analysis shows purity levels above 90%, which appears to deliver reliable results for research work. This product is meant for research use only.

S100A11 belongs to the S100 protein family and is known for its calcium-binding capabilities. The protein seems to play a role in both intracellular and extracellular regulatory activities, taking part in pathways that control cell growth and differentiation. Researchers studying cellular processes and signal transduction often find S100A11 particularly interesting, given its involvement in multiple cellular pathways.

Potential Applications

Note: The applications listed below are based on what we know about this protein's biological functions, published research, and experience from experts in the field. However, we haven't fully tested all of these applications ourselves yet. We'd recommend running some preliminary tests first to make sure they work for your specific research goals.

1. Protein-Protein Interaction Studies Using Pull-Down Assays

The N-terminal 6xHis-SUMO tag allows for efficient purification and immobilization of recombinant S100A11 on nickel-affinity resins during pull-down experiments. This method may help identify and characterize potential binding partners of S100A11 in cell lysates or with purified candidate proteins. The high purity (>90%) likely reduces background binding from contaminants during interaction studies. The full-length mature protein (aa 2-105) appears to preserve the native structure needed for authentic protein-protein interactions.

2. Antibody Development and Validation

This recombinant S100A11 could work as an immunogen for generating specific antibodies against human S100A11 or as a standard for validating existing antibodies. The E. coli expression system produces protein without human post-translational modifications, which makes it suitable for developing antibodies that recognize the core protein sequence. The 6xHis-SUMO tag can be used in ELISA-based screening assays to identify high-affinity antibodies during hybridoma selection or phage display campaigns.

3. Biochemical Characterization and Structural Studies

The purified recombinant protein enables detailed biochemical analysis. This includes determining oligomerization states, thermal stability, and calcium-binding properties that are characteristic of S100 family proteins. SDS-PAGE analysis can monitor protein stability under different buffer conditions and temperatures. The high purity level makes this protein suitable for biophysical techniques such as dynamic light scattering, circular dichroism spectroscopy, or analytical ultracentrifugation to study protein folding and conformational

changes.

4. In Vitro Functional Assays and Enzyme Activity Studies

This recombinant S100A11 may work as a substrate or cofactor in cell-free biochemical assays to study its role in various cellular processes. Researchers can incorporate the protein into reconstituted systems to examine its effects on other proteins or enzymatic activities. The SUMO tag provides an additional purification handle and can be removed by SUMO protease if native protein is required for specific functional studies.

Reconstitution	We recommend that this vial be briefly centrifuged prior to opening to bring the contents to the bottom. Please reconstitute protein in deionized sterile water to a concentration of 0.1-1.0 mg/mL.We recommend to add 5-50% of glycerol (final concentration) and aliquot for long-term storage at -20°C/-80°C. Our default final concentration of glycerol is 50%. Customers could use it as reference.
Shelf Life	The shelf life is related to many factors, storage state, buffer ingredients, storage temperature and the stability of the protein itself. Generally, the shelf life of liquid form is 6 months at -20°C/-80°C. The shelf life of lyophilized form is 12 months at -20°C/-80°C.