



# Recombinant Protein Technical Manual

## Recombinant Human S100A9 Protein

RPES3295

### Product Data:

**Product SKU:** RPES3295

**Size:** 50µg

**Species:** Human

**Expression host:** E. coli

**Uniprot:** NP\_002956.1

### Protein Information:

#### Molecular Mass:

**AP Molecular Mass:** 26 & 13 kDa

#### Tag:

#### Bio-activity:

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** Please contact us for more information.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

#### Application:

**Synonyms:** 60B8AG;CAGB;CFAG;CGLB;L1AG;LIAG;MAC387;MIF;MRP4;MRP14;NIF;P14

## Immunogen Information:

**Sequence:** Met 1-Pro 114

## 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-A9, also known as S100 calcium-binding protein A9, S100A9, and CAGB, is a member of the S00 family. S100A9 is expressed by macrophages in acutely inflamed tissues and in chronic inflammation. It is also expressed in epithelial cells constitutively or induced during dermatoses. S100A9 is a calcium-binding protein. It has anti-microbial activity towards bacteria and fungi. The anti-microbial and proapoptotic activity of S100A9 is inhibited by zinc ions. S100A9 plays a role in the development of endotoxic shock in response to bacterial lipopolysaccharide (LPS). It promotes tubulin polymerization when unphosphorylated. It also promotes phagocyte migration and infiltration of granulocytes at sites of wounding. S100A9 plays a role as a pro-inflammatory mediator in acute and chronic inflammation and up-regulates the release of IL8 and cell-surface expression of ICAM1.