# Recombinant Rat S100A9 Protein (His Tag)

Catalog Number: PDER100157



Note: Centrifuge before opening to ensure complete recovery of vial contents.

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 Species
 Rat

 Mol\_Mass
 13.0 kDa

 Accession
 P50116-1

**Bio-activity** Not validated for activity

#### **Properties**

**Purity** > 85% as determined by reducing SDS-PAGE.

**Endotoxin** < 10 EU/mg of the protein as determined by the LAL method

**Storage** Generally, 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.

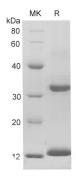
ShippingThis product is provided as lyophilized powder which is shipped with ice packs.FormulationLyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5%

Mannitol.

**Reconstitution** It is recommended that sterile water be added to the vial to prepare a stock solution of

0.5 mg/mL. Concentration is measured by UV-Vis.

## Data



> 85 % as determined by reducing SDS-PAGE.

## Background

#### For Research Use Only

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S100 protein is a family of low molecular weight protein found in vertebrates characterized by two EF-hand calciumbinding motifs. There are at least 21 different S100 proteins, and the name is derived from the fact that the protein is 10 0% 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, S100A 9, and CAGB, is a member of the S-100 family. S100A9 is expressed by macrophages in acutely inflammed tissues and in chronic inflammation. It is also expressed in epithelial cells constitutively or induced during dermatoses. It has antimicrobial 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. 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 upregulates the release of IL8 and cell-surface expression of ICAM1.