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# S100a8 Polyclonal Antibody

(Catalog # A56182)

**Background**
S100A8 is a calcium- and zinc-binding protein which plays a prominent role in the regulation of inflammatory processes and immune response. It can induce neutrophil chemotaxis and adhesion. Predominantly found as calprotectin (S100A8/A9) which has a wide plethora of intra- and extracellular functions. The intracellular functions include: facilitating leukocyte arachidonic acid trafficking and metabolism, modulation of the tubulin-dependent cytoskeleton during migration of phagocytes and activation of the neutrophilic NADPH-oxidase. Activates NADPH-oxidase by facilitating the enzyme complex assembly at the cell membrane, transferring arachidonic acid, an essential cofactor, to the enzyme complex and S100A8 contributes to the enzyme assembly by directly binding to NCF2/P67PHOX. The extracellular functions involve proinfammatory, antimicrobial, oxidant-scavenging and apoptosis-inducing activities. Its proinflammatory activity includes recruitment of leukocytes, promotion of cytokine and chemokine production, and regulation of leukocyte adhesion and migration. Acts as an alarmin or a danger associated molecular pattern (DAMP) molecule and stimulates innate immune cells via binding to pattern recognition receptors such as Toll-like receptor 4 (TLR4) and receptor for advanced glycation endproducts (AGER). Binding to TLR4 and AGER activates the MAP-kinase and NF-kappa-B signaling pathways resulting in the amplification of the proinflammatory cascade. Has antimicrobial activity towards bacteria and fungi and exerts its antimicrobial activity probably via chelation of Zn2+ which is essential for microbial growth. Can induce cell death via autophagy and apoptosis and this occurs through the cross-talk of mitochondria and lysosomes via reactive oxygen species (ROS) and the process involves BNIP3. Can regulate neutrophil number and apoptosis by an anti-apoptotic effect; regulates cell survival via ITGAM/ITGB and TLR4 and a signaling mechanism involving MEK-ERK. Its role as an oxidant scavenger has a protective role in preventing exaggerated tissue damage by scavenging oxidants.

**Description**
S100a8 Polyclonal Antibody. Unconjugated. Raised in: Rabbit.

**Formulation**
Liquid. 0.03% Proclin 300. 50% Glycerol, 0.01M PBS, pH 7.4.

**Specificity**
Mouse

**Isotype**
IgG

**Uniprot ID**
P27005

**Purification**
Protein G purified

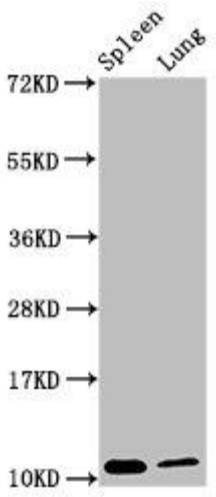
**Immunogen**
Recombinant Mouse Protein S100-A8 protein (2-89AA)

**Storage**
Shipped at 4°C. Upon delivery aliquot and store at -20°C (short-term) or -80°C (long-term). Avoid repeated freeze.

**Alternative Names**
Calgranulin-A, Chemotactic cytokine CP-10, Leukocyte L1 complex light chain, Migration inhibitory factor-related protein 8, Pro-inflammatory S100 cytokine, S100 calcium-binding protein A8, Caga, Mrp8, S100a8

**Application**
ELISA, WB; Recommended dilution: WB:1:500-1:5000




Western Blot
Positive WB detected in: Mouse spleen tissue, Mouse lung tissue
All lanes: S100a8 antibody at 3.8µg/ml
Secondary
Goat polyclonal to rabbit IgG at 1/50000 dilution
Predicted band size: 11 kDa
Observed band size: 11 kDa