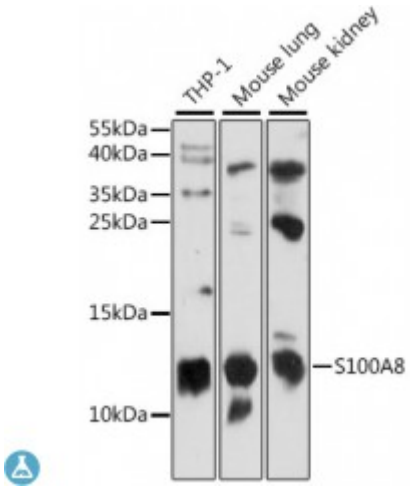
Anti-S100A8 Antibody



Description	The protein encoded by this gene is a member of the S100 family of proteins containing 2 EF-hand calcium-binding motifs. S100 proteins are localized in the cytoplasm and/or nucleus of a wide range of cells, and involved in the regulation of a number of cellular processes such as cell cycle progression and differentiation. S100 genes include at least 13 members which are located as a cluster on chromosome 1q21. This protein may function in the inhibition of casein kinase and as a cytokine. Altered expression of this protein is associated with the disease cystic fibrosis. Multiple transcript variants encoding different isoforms have been found for this gene.
Model	STJ117510
Host	Rabbit
Reactivity	Human, Mouse
Applications	WB
Immunogen	Recombinant fusion protein containing a sequence corresponding to amino acids 1-93 of human S100A8 (NP_002955.2).
Gene ID	6279
Gene Symbol	S100A8
Dilution range	WB 1:500 - 1:2000
Tissue Specificity	Calprotectin (S100A8/9) is predominantly expressed in myeloid cells, Except for inflammatory conditions, the expression is restricted to a specific stage of myeloid differentiation since both proteins are expressed in circulating neutrophils and monocytes but are absent in normal tissue macrophages and lymphocytes, Under chronic inflammatory conditions, such as psoriasis and

	malignant disorders, also expressed in the epidermis, Found in high concentrations at local sites of inflammation or in the serum of
Purification	Affinity purification
Note	For Research Use Only (RUO).
Protein Name	Protein S100-A8 Calgranulin-A Calprotectin L1L subunit Cystic fibrosis antigen CFAG Leukocyte L1 complex light chain Migration inhibitory factor-related protein 8 MRP-8 p8 S100 calcium-binding protein
Molecular Weight	10.835 kDa
Clonality	Polyclonal
Conjugation	Unconjugated
Isotype	IgG
Formulation	PBS with 0.02% sodium azide, 50% glycerol, pH7.3.
Storage Instruction	Store at -20C. Avoid freeze / thaw cycles.
Database Links	HGNC:10498OMIM:123885Reactome:R-HSA-5686938
Alternative Names	Protein S100-A8 Calgranulin-A Calprotectin L1L subunit Cystic fibrosis antigen CFAG Leukocyte L1 complex light chain Migration inhibitory factor-related protein 8 MRP-8 p8 S100 calcium-binding protein
Function	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 proinflammatory, 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 Zn(2+) 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
Cellular Localization	Secreted, Cytoplasm, Cytoplasm, cytoskeleton, Cell membrane

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