

Anti-S100A8 Antibody
Catalog # ABO12428**Specification**

Anti-S100A8 Antibody - Product Information

Application	WB, IHC-P
Primary Accession	P27005
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized

Description

Rabbit IgG polyclonal antibody for Protein S100-A8(S100A8) detection. Tested with WB, IHC-P in Mouse;Rat.

Reconstitution

Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Anti-S100A8 Antibody - Additional Information

Gene ID 20201

Other Names

Protein S100-A8, Calgranulin-A, Chemotactic cytokine CP-10, Leukocyte L1 complex light chain, Migration inhibitory factor-related protein 8, MRP-8, p8, Pro-inflammatory S100 cytokine, S100 calcium-binding protein A8, S100a8, Caga, Mrp8

Calculated MW

10295 MW KDa

Application Details

Immunohistochemistry(Paraffin-embedded Section), 0.5-1 µg/ml, Mouse, Rat, By Heat

Western blot, 0.1-0.5 µg/ml, Mouse

Subcellular Localization

Secreted . Cytoplasm . Cytoplasm, cytoskeleton . Cell membrane ; Peripheral membrane protein . Predominantly localized in the cytoplasm. Upon elevation of the intracellular calcium level, translocated from the cytoplasm to the cytoskeleton and the cell membrane. Upon neutrophil activation or endothelial adhesion of monocytes, is secreted via a microtubule-mediated, alternative pathway.

Protein Name

Protein S100-A8

Contents

Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.

Immunogen

E.coli-derived mouse S100A8 recombinant protein (Position: P2-E89). Mouse S100A8 shares 58.6%

and 80.5% amino acid (aa) sequence identity with human and rat S100A8, respectively.

Purification

Immunogen affinity purified.

Cross Reactivity

No cross reactivity with other proteins.

Storage

At -20°C for one year. After r°Constitution, at 4°C for one month. It°Can also be aliquotted and stored frozen at -20°C for a longer time.Avoid repeated freezing and thawing.

Anti-S100A8 Antibody - Protein Information

Name S100a8 {ECO:0000312|MGI:MGI:88244}

Synonyms Caga, Mrp8

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. Also participates in regulatory T-cell differentiation together with CD69. 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 pro-inflammatory, antimicrobial, oxidant-scavenging and apoptosis-inducing activities. Its pro- inflammatory 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 pro-inflammatory 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; 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. The iNOS-S100A8/A9 transnitrosylase complex is proposed to direct selective inflammatory stimulus-dependent S- nitrosylation of multiple targets such as GAPDH, ANXA5, EZR, MSN and VIM by recognizing a [IL]-x-C-x-x-[DE] motif; S100A8 seems to contribute to S-nitrosylation site selectivity (By similarity).

Cellular Location

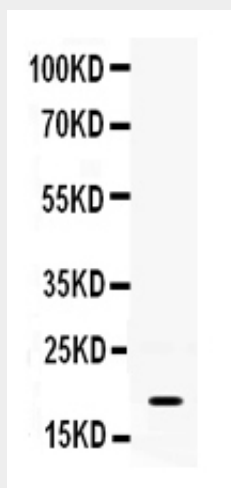
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Note=Predominantly localized in the cytoplasm. Upon elevation of the intracellular calcium level, translocated from the cytoplasm to the cytoskeleton and the cell membrane. Upon neutrophil activation or endothelial adhesion of monocytes, is secreted via a microtubule- mediated, alternative pathway

Anti-S100A8 Antibody - Protocols

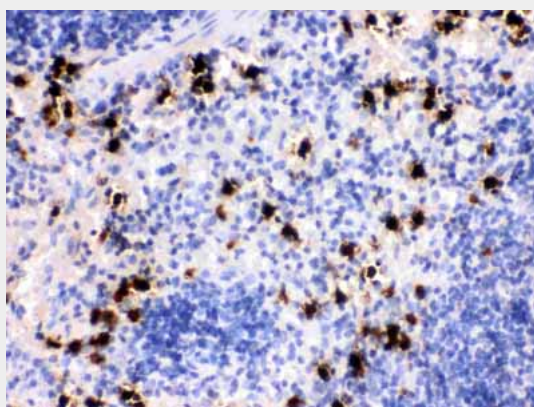
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

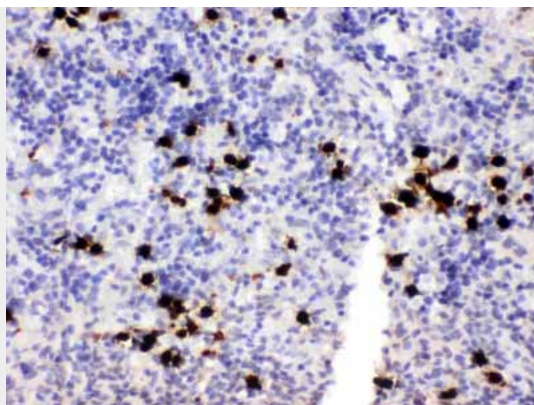
Anti-S100A8 Antibody - Images



Anti- S100A8 Picoband antibody, ABO12428, Western blottingAll lanes: Anti S100A8 (ABO12428)
at 0.5ug/mlWB: Mouse Spleen Tissue Lysate at 50ugPredicted bind size: 11KDObserved bind size:
19KD



Anti- S100A8 Picoband antibody, ABO12428, IHC(P)IHC(P): Mouse Spleen Tissue



Anti- S100A8 Picoband antibody, ABO12428, IHC(P)IHC(P): Rat Spleen Tissue

Anti-S100A8 Antibody - Background

S100 calcium-binding protein A8 (S100A8) is a protein that in humans is encoded by the S100A8 gene. It is also known as calgranulin A. 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.