10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-S100A9 Picoband Antibody

Catalog # ABO12364

Product Information

Application	WB, IHC-P, E
Primary Accession	P31725
Host	Rabbit
Reactivity	Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Protein S100-A9(S100A9) detection. Tested with WB, IHC-P, ELISA in Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	20202
Other Names	Protein S100-A9, Calgranulin-B, Leukocyte L1 complex heavy chain, Migration inhibitory factor-related protein 14, MRP-14, p14, S100 calcium-binding protein A9, S100a9, Cagb, Mrp14
Calculated MW	13049
Application Details	Immunohistochemistry(Paraffin-embedded Section), 0.5-1 □g/ml, Mouse, Rat, By Heat ELISA , 0.1-0.5 □g/ml, Mouse, - Western blot, 0.1-0.5 □g/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.
Source	Eukaryota
Protein Name	Protein S100-A9
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived mouse S100A9 recombinant protein (Position: A2-K113). Mouse S100A9 shares 59.8% and 78.6% amino acid (aa) sequence identity with human and rat S100A9, 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.

Protein Information

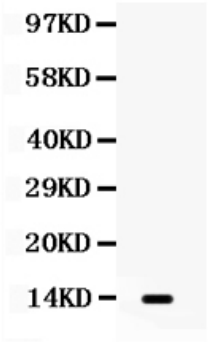
Name	S100a9
Synonyms	Cagb, Mrp14
Function	S100A9 is a calcium- and zinc-binding protein which plays a prominent role in the regulation of inflammatory processes and immune response (PubMed:15331440, PubMed:17767165, PubMed:18403730, PubMed:19402754, PubMed:22804476, PubMed:34562450). It can induce neutrophil chemotaxis, adhesion, can increase the bactericidal activity of neutrophils by promoting phagocytosis via activation of SYK, PI3K/AKT, and ERK1/2 and can induce degranulation of neutrophils by a MAPK-dependent mechanism (By similarity). Predominantly found as calprotectin (S100A8/A9) which has a wide plethora of intra- and extracellular functions (By similarity). 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 (PubMed:15331440). Also participates in regulatory T-cell differentiation together with CD69 (By similarity). 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 (By similarity). The extracellular functions involve pro-inflammatory, antimicrobial, oxidant-scavenging and apoptosis-inducing activities (PubMed:21382888). Its pro- inflammatory activity includes recruitment of leukocytes, promotion of cytokine and chemokine production, and regulation of leukocyte adhesion and migration (By similarity). 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) (PubMed:17767165, PubMed:18403730, PubMed:19402754). Binding to TLR4 and AGER activates the MAP-kinase and NF-kappa-B signaling pathways resulting in the amplification of the pro-inflammatory cascade (PubMed:17767165, PubMed:18403730, PubMed:19402754, PubMed:22804476). Has antimicrobial activity towards bacteria and fungi and exerts its antimicrobial activity probably via chelation of Zn(2+) which is essential for microbial growth (By similarity). 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 (By similarity). 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 (By similarity). Its role as an oxidant scavenger has a protective role in preventing exaggerated tissue damage by scavenging oxidants (By similarity). The iNOS-S100A8/A9 transnitrosylase complex is proposed to direct selective inflammatory stimulus-dependent S-nitrosylation of multiple targets such as GAPDH, NXA5, EZR, MSN and VIM by recognizing a [IL]-x-C-x-x-[DE] motif (By similarity).
Cellular Location	Secreted {ECO:0000250|UniProtKB:P06702}. Cytoplasm {ECO:0000250|UniProtKB:P06702}. Cytoplasm, cytoskeleton

{ECO:0000250|UniProtKB:P06702}. Cell membrane
{ECO:0000250|UniProtKB:P06702}; Peripheral membrane protein
{ECO:0000250|UniProtKB:P06702}. 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
{ECO:0000250|UniProtKB:P06702}

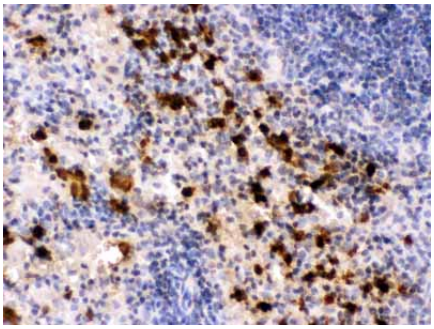
Background

S100 calcium-binding protein A9 (S100A9), also known as migration inhibitory factor-related protein 14 (MRP14) or calgranulin B, is a protein that in humans is encoded by the S100A9 gene. S100-A9 is a member of the S100 family of proteins containing 2 EF hand calcium-binding motifs. And 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.

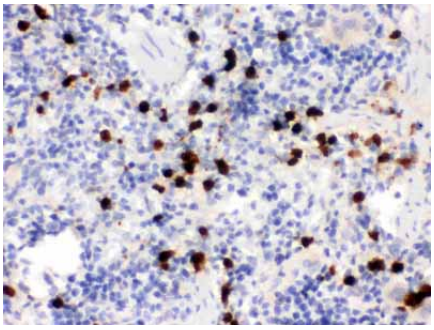
Images



Anti- S100A9 Picoband antibody, ABO12364, Western blottingAll lanes: Anti S100A9 (ABO12364) at 0.5ug/mlWB: Mouse Ovary Tissue Lysate at 50ugPredicted bind size: 13KDObserved bind size: 13KD



Anti- S100A9 Picoband antibody, ABO12364, IHC(P)IHC(P): Mouse Spleen Tissue



Anti- S100A9 Picoband antibody, ABO12364, IHC(P)IHC(P): Rat Spleen Tissue

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.