

Protein S100-A9 (S100a9) Recombinant Protein | S100a9 recombinant protein

Recombinant Rat Protein S100-A9 (S100a9)

CATALOG # AAA115639	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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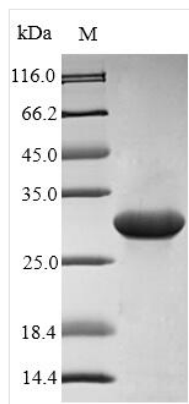
PRODUCT SYNONYMS

Protein S100-A9 (S100a9); Recombinant Rat Protein S100-A9 (S100a9); Protein S100-A9; Calgranulin-B; Migration inhibitory factor-related protein 14; MRP-14; p14; Myeloid-related protein 14; S100 calcium-binding protein A9; S100a9 recombinant protein

PRODUCT SPECIFICATIONS

Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE.
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Sequence Positions	2-113aa; Full Length of Mature Protein
Sequence	AAKTGSQLER SISTIINVFH QYSRKYGHPD TLNKAEFKEM VNKDLPNFLK REKRNNENLLR DIMEDLDTNQ DNQLSFEECM MLMGKLIFAC HEKLHENNPR GHDHSHGKGC GK
Sequence Length	113
Species	Rattus norvegicus (Rat)
Production Note	Special Offer: The E Coli host-expressed protein is manufactured from a stock plasmid containing the protein gene. E Colihost-expressed protein is stocked in different unit sizes ranging from as small as 10 ug to as large as 1 mg. Bulk inventory is also available. The E Coli host-expressed protein has been ordered over and over again by researchers and has stood the test of time as both a robust protein and important target for the research community. It is part of our new program to make our most popular protein targets and corresponding hosts available in expanded unit sizes and with a quick processing time. Select E Coli host-expressed protein for the fastest delivery among all hosts. Please contact our or email to for more details.
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for S100a9 recombinant protein	S100A9 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, 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. Predominantly found as calprotectin (S100A8/A9) which has a wide plethora of intra- and Extracellular domain 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 domain 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 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. 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).
Product Categories/Family for S100a9 recombinant protein	Immunology

NCBI AND UNIPROT INFORMATION

NCBI GI #	16758364
NCBI GeneID	94195
NCBI Accession #	NP_446039.1
NCBI GenBank Nucleotide #	NM_053587.1
UniProt Accession #	P50116; Q761U7
Molecular Weight	29 kDa
NCBI Official Full Name	protein S100-A9
NCBI Official Synonym Full Names	S100 calcium binding protein A9
NCBI Official Symbol	S100a9
NCBI Official Synonym Symbols	Mrp14
NCBI Protein Information	protein S100-A9; p14; MRP-14; calgranulin-B; myeloid-related protein 14; intracellular calcium-binding protein (MRP14); migration inhibitory factor-related protein 14; S100 calcium binding protein A9 (calgranulin B); S100 calcium-binding protein A9 (calgranulin B)
UniProt Protein Name	Protein S100-A9
UniProt Gene Name	S100a9
UniProt Synonym Gene Names	Mrp14; MRP-14; p14
UniProt Entry Name	S10A9_RAT

For Research Use Only. Not for use in diagnostic or therapeutic procedures. Small volumes of product may become entrapped in the seal of the vial during shipment and storage; if necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the cap.

