

S100-A8 Recombinant Protein | S100a8 recombinant protein

Recombinant Mouse Protein S100-A8

CATALOG # AAA113346	HOST E Coli or Yeast or Baculovirus or Mammalian Cell
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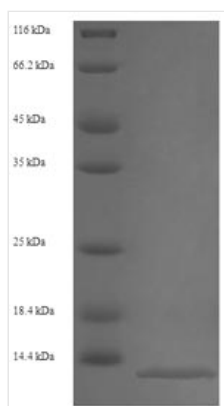
PRODUCT SYNONYMS

S100-A8; Recombinant Mouse 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 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	2-89aa; Full Length of Mature Protein
Sequence	PSELEKALSN LIDVYHNYSN IQGNHHALYK NDFKKMVTTE CPQFVQNINI ENLFRELDIN SDNAINFEFF LAMVIKVGVA SHKDSHKE
Sequence Length	89
Production Note	Special Offer: The E Coli, Yeast host-expressed protein is manufactured from a stock plasmid containing the protein gene. E Coli, Yeast host-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, Yeast 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, Yeast 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 degree C, for extended storage, conserve at -20 degree C or -80 degree C.

IMAGES



SDS-PAGE

ADDITIONAL INFORMATION

Related Product Information for S100a8 recombinant protein	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 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, ANXA5, EZR, MSN and VIM by recognizing a [L]-x-C-x-x-[DE] motif; S100A8 seems to contribute to S-nitrosylation site selectivity.
References	Mouse MRP8 and MRP14, two intracellular calcium-binding proteins associated with the development of the myeloid lineage. Lagasse E., Weissman I.L. Blood 79:1907-1915(1992) Identification of a chemotactic domain of the pro-inflammatory S100 protein CP-10. Lackmann M., Rajasekariah P., Iismaa S.E., Jones G., Cornish C.J., Hu S., Simpson R.J., Moritz R.L., Geczy C.L.J. Immunol. 150:2981-2991(1993) Molecular characterisation of the genomic locus of the mouse MRP8 gene. Nacken W.K.F., Manitz M.P., Sorg C. Biochim. Biophys. Acta 1315:1-5(1996) Purification and structural analysis of a murine chemotactic cytokine (CP-10) with sequence homology to S100 proteins. Lackmann M., Cornish C.J., Simpson R.J., Moritz R.L., Geczy C.L.J. Biol. Chem. 267:7499-7504(1992) A null mutation in the inflammation-associated S100 protein S100A8 causes early resorption of the mouse embryo. Passey R.J., Williams E., Lichanska A.M., Wells C., Hu S., Geczy C.L., Little M.H., Hume D.A.J. Immunol. 163:2209-2216(1999) MRP8 and MRP14 are endogenous activators of Toll-like receptor 4, promoting lethal, endotoxin-induced shock. Vogl T., Tenbrock K., Ludwig S., Leukert N., Ehrhardt C., van Zoelen M.A.D., Nacken W., Foell D., van der Poll T., Sorg C., Roth J. Nat. Med. 13:1042-1049(2007) S100A8 and S100A9 mediate endotoxin-induced cardiomyocyte dysfunction via the receptor for advanced glycation end products. Boyd J.H., Kan B., Roberts H., Wang Y., Walley K.R. Circ. Res. 102:1239-1246(2008) S-nitrosylated S100A8 novel anti-inflammatory properties. Lim S.Y., Raftery M., Cai H., Hsu K., Yan W.X., Hsieh H.L., Watts R.N., Richardson D., Thomas S., Perry M., Geczy C.L.J. Immunol. 181:5627-5636(2008) Anti-infective protective properties of S100 calgranulins. Hsu K., Champaiboon C., Guenther B.D., Sorenson B.S., Khammanivong A., Ross K.F., Geczy C.L., Herzberg M.C. Antiinflamm. Antiallergy Agents Med. Chem. 8:290-305(2009) Inflammation-associated S100 proteins new mechanisms that regulate function. Goyette J., Geczy C.L. Amino Acids 41:821-842(2011)

NCBI AND UNIPROT INFORMATION

NCBI GI #	7305453
NCBI GeneID	20201
NCBI Accession #	NP_038678.1
NCBI GenBank Nucleotide #	NM_013650.2
UniProt Accession #	P27005; P31724
Molecular Weight	12.2 kDa
NCBI Official Full Name	protein S100-A8
NCBI Official Synonym Full Names	S100 calcium binding protein A8 (calgranulin A)
NCBI Official Symbol	S100a8

NCBI Official Synonym Symbols	p8; B8Ag; CFAG; Caga; MRP8; CP-10; 60B8Ag; AI323541
NCBI Protein Information	protein S100-A8
UniProt Protein Name	Protein S100-A8
UniProt Gene Name	S100a8
UniProt Synonym Gene Names	Caga; Mrp8; MRP-8; p8
UniProt Entry Name	S10A8_MOUSE

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.

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Online datasheet: <https://www.aaabiotech.com/s100a8-recombinant-protein-e-coli/113346>