

S100-A8 Recombinant Protein | S100A8 recombinant protein

Recombinant Human Protein S100-A8

CATALOG #
AAA113609

PRODUCT SYNONYMS

S100-A8; Recombinant Human 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; p8S100 calcium-binding protein A8; Urinary stone protein band A; S100A8 recombinant protein

PRODUCT SPECIFICATIONS

Purity/Purification	Greater than 90% as determined by SDS-PAGE.
Form/Format	Liquid containing glycerol
Sequence Positions	1-93; Full length
Sequence	MLTELEKALN SIIDVYHKYS LIKGNFHAVY RDDLKKLLET ECPQYIRKKG ADVWFKELDI NTDGAVNFQE FLILVIKMGV AAHKKSHEES HKE
Sequence Length	93
Product Note	Applications are user defined. Product is developed and quality control tested in house, data or additional information may be provided upon request. The researcher needs to establish and confirm the suitability of the product for their application.
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 chokine 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. Can act as a potent amplifier of inflammation in autoimmunity as well as in cancer development and tumor spread. The iNOS-S100A8/A9 transnitrosylase complex directs selective inflammatory stimulus-dependent S-nitrosylation of GAPDH and probably multiple targets such as ANXA5, EZR, MSN and VIM by recognizing a [IL]-x-C-x-x-[DE] motif; S100A8 ses to contribute to S-nitrosylation site selectivity.
Product Categories/Family for S100A8 recombinant protein	Immunology; Raw Materials Assay Development
References	A clue to the basic defect in cystic fibrosis from cloning the CF antigen gene.Dorin J.R., Novak M., Hill R.E., Brock D.J.H., Secher D.S., van Heyningen V.Nature 326:614-617(1987) Two calcium-binding proteins in infiltrate macrophages of rheumatoid arthritis.Odink K., Cerletti N., Bruggen J., Clerc R.G., Tarcsay L., Zwaldo G., Gerhards G., Schlegel R., Sorg C.Nature 330:80-82(1987) Cloning and expression of two human genes encoding calcium-binding proteins that are regulated during myeloid differentiation.Lagasse E., Clerc R.G.Mol. Cell. Biol. 8:2402-2410(1988) The calcium-binding protein MRP-8 is produced by human pulmonary tumor cells.Schaefer T., Sachse G.E., Gassen H.G.Biol. Chem. Hoppe-Seyler 372:1-4(1991) Complete sequencing and characterization of 21,243 full-length human cDNAs.Ota T., Suzuki Y., Nishikawa T., Otsuki T., Sugiyama T., Irie R., Wakamatsu A., Hayashi K., Sato H., Nagai K., Kimura K., Makita H., Sekine M., Obayashi M., Nishi T., Shibahara T., Tanaka T., Ishii S., Yamamoto J., Saito K., Kawai Y., Isono Y., Nakamura Y., Nagahari K., Murakami K., Yasuda T., Iwayanagi T., Wagatsuma M., Shiratori A., Sudo H., Hosoiri T., Kaku Y., Kodaira H., Kondo H., Sugawara M., Takahashi M., Kanda K., Yokoi T., Furuya T., Kikkawa E., Omura Y., Abe K., Kamihara K., Katsuta N., Sato K., Tanikawa M., Yamazaki M., Ninomiya K., Ishibashi T., Yamashita H., Murakawa K., Fujimori K., Tanai H., Kimata M., Watanabe M., Hiraoka S., Chiba Y., Ishida S., Ono Y., Takiguchi S., Watanabe S., Yosida M., Hotuta T., Kusano J., Kanehori K., Takahashi-Fujii A., Hara H., Tanase T.-O., Nomura Y., Togiya S., Komai F., Hara R., Takeuchi K., Arita M., Imose N., Musashino K., Yuuki H., Oshima A., Sasaki N., Aotsuka S., Yoshikawa Y., Matsunawa H., Ichihara T., Shiohata N., Sano S., Moriya S., Momiyama H., Satoh N., Takami S., Terashima Y., Suzuki O., Nakagawa S., Senoh A., Mizoguchi H., Goto Y., Shimizu F., Wakebe H., Hishigaki H., Watanabe T., Sugiyama A., Takemoto M., Kawakami B., Yamazaki M., Watanabe K., Kumagai A., Itakura S., Fukuzumi Y., Fujimori Y., Komiyama M., Tashiro H., Tanigami A., Fujiwara T., Ono T., Yamada K., Fujii Y., Ozaki K., Hirao M., Ohmori Y., Kawabata A., Hikiji T., Kobatake N., Inagaki H., Ikema Y., Okamoto S., Okitani R., Kawakami T., Noguchi S., Itoh T., Shigeta K., Senba T., Matsumura K., Nakajima Y., Mizuno T., Morinaga M., Sasaki M., Togashi T., Oyama M., Hata H., Watanabe M., Komatsu T., Mizushima-Sugano J., Satoh T., Shirai Y., Takahashi Y., Nakagawa K., Okumura K., Nagase T., Nomura N., Kikuchi H., Masuho Y., Yamashita R., Nakai K., Yada T., Nakamura Y., Ohara O., Isogai T., Sugano S.Nat. Genet. 36:40-45(2004)

NCBI AND UNIPROT INFORMATION

NCBI GI #	21614544
NCBI GeneID	6279
NCBI Accession #	NP_002955.2
NCBI GenBank Nucleotide #	NM_002964.4

UniProt Accession #	P05109
Molecular Weight	14.9kD
NCBI Official Full Name	protein S100-A8 isoform d
NCBI Official Synonym Full Names	S100 calcium binding protein A8
NCBI Official Symbol	S100A8
NCBI Official Synonym Symbols	P8; MIF; NIF; CAGA; CFAG; CGLA; L1Ag; MRP8; CP-10; MA387; 60B8AG
NCBI Protein Information	protein S100-A8
UniProt Protein Name	Protein S100-A8
UniProt Gene Name	S100A8
UniProt Synonym Gene Names	CAGA; CFAG; MRP8; CFAG; MRP-8; p8

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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