S100A13 Recombinant Protein

PRODUCT OVERVIEW

Product Name	S100A13, Recombinant Protein
Full Product Name	S100A13 Protein, Mouse, Recombinant (His Tag)
Product Gene Name	S100A13 recombinant protein
Product Synonym Names	Mouse S100A13 Protein (His Tag); S100A13 Protein, Mouse; S100 calcium binding protein A13
Sequence	Met1-Lys98
Host	E Coli
Form/Format	Lyophilized from sterile PBS, 10% glycerol, pH7.4. Normally 5%-8% trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Please refer to the specific buffer information in the hard copy of CoA.
Purity/Purification	>90% as determined by SDS-PAGE
Preparation and Storage	Samples are stable for up to twelve months from date of receipt at -20 degree C to -80 degree C. Store it under sterile conditions at -20 degree C to -80 degree C. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles. In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice.
Molecular Weight	11,158 Da
3D Structure	ModBase 3D Structure for P97352
Species	Mouse
Predicted N Terminal	Met
Tag	N-His
Protein Construction	A DNA sequence encoding the mouse S100A13 (P97352)(Met1-Lys98) was expressed with a polyhistidine tag at the N-terminus.
Reconstitution	A hardcopy of COA with reconstitution instruction is sent along with the products. Please refer to it for detailed information.
Product Categories/Family for S100A13 recombinant protein	Calcium-binding Proteins and Related Molecules
Related Product Information for S100A13 recombinant protein	Background: S100 protein is a family of low molecular weight protein found in vertebrates characterized by two EF-hand calcium-binding motifs. There are at least 21 different S100 proteins, and the name is derived from the fact that the protein is 100% soluble in ammonium sulfate at neutral pH. Most S100 proteins are disulfide-linked homodimer, and is normally present in cells derived from theneural crest, chondrocytes, macrophages, dendritic cells, etc. S100 proteins have been implicated in a variety of intracellular and extracellular functions. They are involved in regulation of protein phosphorylation, transcription factors, the dynamics of cytoskeleton constituents, enzyme activities, cell growth and differentiation, and the inflammatory response. Protein S100-A13, also known as S100 calciumbinding protein A13, is a member of the S-100 family. It contains two EF-hand domains. S100A13 binds two calcium ions per subunit and one copper ion. Binding of one copper ion does not interfere with calcium-binding. S100A13 is required for the copper-dependent stress-induced export of IL1A and FGF1. The calcium-free protein binds to lipid vesicles containing phosphatidylserine, but not to vesicles containing phosphatidylcholine. S100A13 plays a role in the export of proteins that lack a signal peptide and are secreted by an alternative pathway.
Product References and Citations for S100A13 recombinant protein	Mandinova A. et al., 2003, J Cell Sci. 116: 2687-96. Arnesano F. et al., 2005, Angew Chem Int Ed. 44: 6341-4. Viemann D. et al., 2005, Blood. 105: 2955-62. Nakatani Y. et al., 2005, Mediators Inflamm. 2005: 280-92. Bjoerk P. et al., 2009, PLoS Biol. 7: E97-E97.

Other Notes	Small volumes of S100A13 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for S100A13 purchase	MBS8122613 is a recombinant protein targeting S100A13. Also known as S100A13 Protein, Mouse, Recombinant (His Tag). Host: E Coli.



SDS-Page of S100A13 recombinant protein

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for S100A13. It may not necessarily be applicable to this product.

NCBI GI #	2493417
NCBI GeneID	20196
NCBI Accession #	P97352.1
UniProt Primary Accession #	P97352
UniProt Related Accession #	P97352
NCBI Official Full Name	Protein S100-A13
NCBI Official Synonym Full Names	S100 calcium binding protein A13
NCBI Official Symbol	S100a13
UniProt Protein Name	Protein S100-A13
UniProt Synonym Protein Names	S100 calcium-binding protein A13
Protein Family	Protein
UniProt Gene Name	S100a13
NCBI Protein Information	protein S100-A13
UniProt Comments for S100A13	S100A13: Plays a role in the export of proteins that lack a signal peptide and are secreted by an alternative pathway. Binds two calcium ions per subunit. Binds one copper ion. Binding of one copper ion does not interfere with calcium binding. Required for the copper-dependent stress-induced export of IL1A and FGF1. The calcium-free protein binds to lipid vesicles containing phosphatidylserine, but not to vesicles containing phosphatidylcholine. Belongs to the S-100 family. Chromosomal Location of Human Ortholog: 3 F1|3 39.24 cM Cellular Component: cytoplasm; cytosol; extracellular space; nucleus; perinuclear region of cytoplasm Molecular Function: calcium ion binding; copper ion binding; fibroblast growth factor binding; protein homodimerization activity; RAGE receptor binding; zinc ion binding Biological Process: cytokine secretion; interleukin-1 alpha secretion; positive regulation of cell proliferation; positive regulation of I-kappaB kinase/NF-kappaB cascade; regulation of cell shape

Research Articles on S100A13	**1.** The structure of S100A13 is characterized by a large patch of negatively charged residues flanked by dense cationic clusters contributed largely by the positively charged residues located at the C-terminal end.
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