Lon Protease Homolog, Mitochondrial (LONP1) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	Lon protease homolog, mitochondrial (Lonp1), Recombinant Protein
Full Product Name	Recombinant Rat Lon protease homolog, mitochondrial (Lonp1) , partial
Product Gene Name	Lonp1 recombinant protein
Product Synonym Gene Name	Lonp1
Sequence	MYDVTPPGVV MGLAWTAMGG STLFVETSLR RPQPSGSKED KDGSLEVTGQ LGDVMKESAR IAYTFARAFL MEQDPENDFL VTSHIHLHVP EGATPKDGPS AGCTIVTALL SLALGQPVLQ NLAMTGEVSL TGKVLPVGGI KEKTIAAKRA GVTCIILPAE NRKDFSDLAP FITEGLEVHF VEHYRDIFRI AFPLREH
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
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.
Molecular Weight	105,793 Da
Sequence Positions	746-942. Partial,include the Lon proteolytic Domain
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q924S5
Species	Rat
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Lonp1 recombinant protein	This gene encodes a mitochondrial matrix protein in the Lon family of ATP-dependent proteases. A similar E. coli protein regulates gene expression by targeting specific regulatory proteins for degradation. This protein binds a specific sequence in the light and heavy chain promoters of the mitochondrial genome which are involved in regulation of DNA replication and transcription.
Other Notes	Small volumes of Lonp1 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 Lonp1 purchase	MBS1328784 is a recombinant protein targeting Lonp1. Also known as Recombinant Rat Lon protease homolog, mitochondrial (Lonp1) , partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Lonp1. It may not necessarily be applicable to this product.

NCBI GI #	19173766
NCBI GeneID	170916
NCBI Accession #	NP_596895.1

UniProt Primary Accession #	Q924S5
UniProt Related Accession #	Q924S5
GenBank Nucleotide #	NM_133404.1
NCBI Official Full Name	lon protease homolog, mitochondrial
NCBI Official Synonym Full Names	lon peptidase 1, mitochondrial
NCBI Official Symbol	Lonp1
NCBI Official Synonym Symbols	Lon; Prss15
UniProt Protein Name	Lon protease homolog, mitochondrial
UniProt Synonym Protein Names	Lon protease-like protein
UniProt Gene Name	Lonp1
UniProt Synonym Gene Names	Lon; Prss15; LONP
NCBI Protein Information	lon protease homolog, mitochondrial
NCBI Summary for Lonp1	mitochondrial ATP-dependent protease that displays increased expression under conditions of brain ischemia, hypoxia, and ER stress [RGD, Feb 2006]
UniProt Comments for Lonp1	ATP-dependent serine protease that mediates the selective degradation of misfolded, unassembled or oxidatively damaged polypeptides as well as certain short-lived regulatory proteins in the mitochondrial matrix. May also have a chaperone function in the assembly of inner membrane protein complexes. Participates in the regulation of mitochondrial gene expression and in the maintenance of the integrity of the mitochondrial genome. Binds to mitochondrial promoters and RNA in a single-stranded, site-specific, and strand-specific manner. May regulate mitochondrial DNA replication and/or gene expression using site-specific, single-stranded DNA binding to target the degradation of regulatory proteins binding to adjacent sites in mitochondrial promoters.
Research Articles on Lonp1	**1.** Lon protease, a major degradation enzyme in mitochondrial matrix, recognized and degraded mitochondrial CBS by specifically targeting at the oxygenated heme group of CBS proteins.
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