3-Mercaptopyruvate Sulfurtransferase (MPST) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	3-mercaptopyruvate sulfurtransferase (Mpst), Recombinant Protein
Full Product Name	Recombinant Rat 3-mercaptopyruvate sulfurtransferase (Mpst)
Product Gene Name	Mpst recombinant protein
Sequence	AAPQLFRALV SAQWVAEALK SPRASQPLKL LDASWYLPKL GRDARREFEE RHIPGAAFFD IDRCSDHTSP YDHMLPSATH FADYAGSLGV SAATHVVIYD GSDQGLYSAP RVWWMFRAFG HHSVSLLDGG FRYWLSQNLP ISSGKSPSEP AEFCAQLDPS FIKTHEDILE NLDARRFQVV DARAAGRFQG TQPEPRDGIE PGHIPGSVNI PFTEFLTSEG LEKSPEEIQR LFQEKKVDLS KPLVATCGSG VTACHVVLGA FLCGKPDVPV YDGSWVEWYM RAQPEHVISQ GRGKTL
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	32,940 Da
Sequence Positions	2-297aa, Full Length of Mature Protein
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 P97532
Species	Rat
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Mpst recombinant protein	This protein encoded by this gene catalyzes the transfer of a sulfur ion from 3-mercaptopyruvate to cyanide or other thiol compounds. It may be involved in cysteine degradation and cyanide detoxification. There is confusion in literature between this protein (mercaptopyruvate sulfurtransferase, MPST), which appears to be cytoplasmic, and thiosulfate sulfurtransferase (rhodanese, TST, GeneID:7263), which is a mitochondrial protein. Deficiency in MPST activity has been implicated in a rare inheritable disorder known as mercaptolactate-cysteine disulfiduria (MCDU). Alternatively spliced transcript variants encoding same or different isoforms have been identified for this gene.
Other Notes	Small volumes of Mpst 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 Mpst purchase	MBS952963 is a recombinant protein targeting Mpst. Also known as Recombinant Rat 3-mercaptopyruvate sulfurtransferase (Mpst). Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

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

NCBI GI #	20304123
NCBI GeneID	192172

NCBI Accession #	NP_620198.1
UniProt Primary Accession #	P97532
UniProt Related Accession #	P97532
GenBank Nucleotide #	NM_138843.1
NCBI Official Full Name	3-mercaptopyruvate sulfurtransferase
NCBI Official Synonym Full Names	mercaptopyruvate sulfurtransferase
NCBI Official Symbol	Mpst
NCBI Official Synonym Symbols	Mst
UniProt Protein Name	3-mercaptopyruvate sulfurtransferase
Protein Family	3-mercaptopyruvate sulfurtransferase
UniProt Gene Name	Mpst
UniProt Synonym Gene Names	MST
NCBI Protein Information	3-mercaptopyruvate sulfurtransferase
NCBI Summary for Mpst	catalyzes the formation of thiocyanide and pyruvate [RGD, Feb 2006]
UniProt Comments for Mpst	Transfer of a sulfur ion to cyanide or to other thiol compounds. Also has weak rhodanese activity. Detoxifies cyanide and is required for thiosulfate biosynthesis. Acts as an antioxidant. In combination with cysteine aminotransferase (CAT), contributes to the catabolism of cysteine and is an important producer of hydrogen sulfide in the brain, retina and vascular endothelial cells. Hydrogen sulfide H2S is an important synaptic modulator, signaling molecule, smooth muscle contractor and neuroprotectant. Its production by the 3MST/CAT pathway is regulated by calcium ions.
Research Articles on Mpst	**1.** Presented is alternative pathway of production of hydrogen sulfide and/or polysulfides from (poly)sulfurated catalytic-site cysteine of reaction intermediates of MST via thioredoxin reduction.
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