
Product Data Sheet

Product Name: MPST Human
 Cat. No.: GP21954
 Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	3-mercaptopyruvate sulfurtransferase; MST; MPST; TST2.		
Amino Acid Sequence	MGSSHHHHHH SGLVPRGSH MGSHPASPQL CRALVSAQWV AEALRAPRAG QPLQLLDASW YLPKLRDAR REFEERHIPG AAFFDIDQCS DRTSPYDHML PGAEHFAEYA GRLGVGAATH VVIYDASDQG LYSAPRVWWM FRAFGHHAVS LLDGGLRHWW RQNLPLSSGK SQPAPAEFRA QLDPAFIKTY EDIKENLESR RFQVVDSRAT GRFRGTEPEP RDGIEPGHIP GTVNIPFTDF LSQEGLEKSP EEIRHLFQEK KVDLSKPLVA TCGSGVTACH VALGAYLCGK PDVPIYDGSW VEWYMRARPE DWISEGRGKT H.		
Formulation	The MPST solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl, 20% glycerol and 1mM DTT.		

Introduction

Mercaptopyruvate Sulfurtransferase (MPST) catalyzes the transfer of a sulfur ion from 3-mercaptopyruvate to cyanide or other thiol compounds. MPST might be involved in cysteine degradation and cyanide detoxification. The MPST enzyme is regulated by oxidative stress and thioredoxin. In oxidative stress conditions, the catalytic cysteine site is transformed to a sulfenate which inhibits the MPST enzyme activity. The reduced thioredoxin cleaves an intersubunit disulfide bond to activate the redox switch and reactivate the enzyme. A deficiency in MPST activity is implicated in a rare inheritable condition known as MCDU (mercaptolactate-cysteine disulfiduria).

Stability

Store at 4°C if entire vial will be used within 2-4 weeks. Store, frozen at -20°C for longer periods of time. For long term storage it is recommended to add a carrier protein (0.1% HSA or BSA). Avoid multiple freeze-thaw cycles.

Caution: Product has not been fully validated for medical applications. For research use only.

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Background

MPST Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 321 amino acids (1-297) and having a molecular mass of 35kDa. MPST is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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