

## MPST Human

**Description:**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.

Catalog #:ENPS-683

For research use only.

**Synonyms:**3-mercaptopyruvate sulfurtransferase, MST, MPST, TST2.

**Source:**Escherichia Coli.

**Physical Appearance:**Sterile Filtered clear solution.

**Amino Acid Sequence:**MGSSHHHHHH SSGLVPRGSH MGSHMASPQL CRALVSAQWV  
AEALRAPRAG QPLQLLDASW YLPKLGRDAR REFEERHIPG AAFFDIDQCS DRTSPYDHML  
PGAEHFAEYA GRLGVGAATH VVIYDASDQG LYSAPRVWWM FRAFGHHAHV LLDGGLRHWL  
RQNLPLSSGK SQPAPAEFRA QLDPAFIKY EDIKENLESR RFQVVDSRAT GRFRGTEPEP  
RDGIEPGHIP GT

**Purity:**Greater than 95.0% as determined by SDS-PAGE.

### Formulation:

The MPST solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 0.15M NaCl, 20% glycerol and 1mM DTT.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. They may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### 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).

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