

# Recombinant human Glutathione synthetase/GSS protein

Catalog Number: ATGP0776

## PRODUCT INFORMATION

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### Expression system

E.coli

### Domain

1-474aa

### UniProt No.

P48637

### NCBI Accession No.

NP\_000169

### Alternative Names

Glutathione synthetase, GSHS, GSH synthetase

## PRODUCT SPECIFICATION

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### Molecular Weight

54.5 kDa (494aa) confirmed by MALDI-TOF

### Concentration

1mg/ml (determined by Bradford assay)

### Formulation

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 10% glycerol

### Purity

> 95% by SDS-PAGE

### Tag

His-Tag

### Application

SDS-PAGE

### Storage Condition

Can be stored at +2C to +8C for 1 week. For long term storage, aliquot and store at -20C to -80C. Avoid repeated freezing and thawing cycles.

## BACKGROUND

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### Description

Glutathione synthetase, also known GSS, is the second enzyme in the glutathione biosynthesis pathway. It catalyses the condensation of gamma-glutamylcysteine and glycine, to form glutathione. Defects in GSS are the cause of glutathione synthetase deficiency (GSS deficiency) ; also known as 5-oxoprolinuria or pyroglutamic aciduria. It is a severe form characterized by an increased rate of hemolysis and defective function of the central nervous system. Recombinant human GSS protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography techniques.

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## Amino acid Sequence

MGSSHHHHHH SSGLVPRGSH MATNWGSLQ DKQQLEELAR QAVDRALAEG VLLRTSQEPT SSEVVSYPF TLFPSLVPSA  
LLEQAYAVQM DFNLLVDAVS QNAAFLEQL SSTIKQDDFT ARLFDIHKQV LKEGIAQTVF LGLNRSYDMF QRSADGSPAL  
KQIEINTISA SFGGLASRTP AVHRHVLSVL SKTKEAGKIL SNNPSKGLAL GIAKAWELYG SPNALVLLIA  
QEKERNIFDQRAIENELLAR NIHVIRRTFE DISEKGLDQ DRRLFVDGQE IAVVYFRDGY MPROYSLQNW EARLLERSH  
AAKCPDIATQ LAGTKKVQQE LSRPGMLEML LPGQPEAVAR LRATFAGLYS LDVGEEGDQA IAEALAAPSR FVLKPQREGG  
GNNLYGEEVM QALKQLKDE ERASYLMEK IEPEPFENCL LRPGSPARVV QCISELGIFG VYVRQEKTIV MNKHVGHLLR  
TKAIEHADGG VAAGVAVLND PYPV

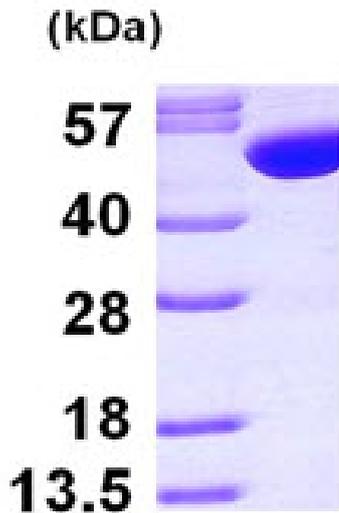
## General References

Polekhina G., et al. (1999) EMBO J. 18:3204-3213.  
Huanq Z A., et al. (2000) Biochim Biophys Acta. 1493:48-55.

## DATA

### SDS-PAGE

3ug by SDS-PAGE under reducing condition and visualized by coomassie blue stain.



15% SDS-PAGE (3ug)