

Recombinant Human GSS, His-tagged

Cat. No. GSS-2870H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant human GSS protein, fused to His-tag at N-terminus, was expressed in E.coli and purified by using conventional chromatography techniques.
Species	Human
Source	E.coli
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.
Sequence	MGSSHHHHQH SSGLVPRGSH MATNWGSLLQ DKQQLEELAR QAVDRALAEG VLLRTSQEPT SSEVVSYPF TLFPSLVPSA LLEQAYAVQM DFNLLVDAVS QNAAFLEQTL SSTIKQDDFT ARLFDIHKQV LKEGIAQTVF LGLNRSDYMF QRSADGSPAL KQIEINTISA SFGGLASRTP AVHRHVLSVL SKTKEAGKIL SNNPSKGLAL GIAKAWELYG SPNALVLLIA QEKERNIFDQRAIENELLAR NIHVIRRTFE DISEKGLDQ DRRLFVDGQE IAVVYFRDGY MPRQYSLQNW EARLLERSH AAKCPDIATQ LAGTKKVQQE LSRPGMLEML LPGQPEAVAR LRATFAGLYS LDVGEEGDQA IAEALAAPSR FVLKPQREGG GNNLYGEEMV QALKQLKDSE ERASYILMEK IEPEPFENCL LRPGSPARVV QCISELGIFG VYVRQEKTIV MNKHVGHLLR TKAIEHADGG VAAGVAVLND PYPV.

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Purity	> 95% by SDS – PAGE.
MW	54.5 kDa (494aa) confirmed by MALDI-TOF.
Form	Liquid. 20mM Tris-HCl buffer (pH8.0) containing 10% glycerol, 2mM DTT, 50mM NaCl, 0.1mM PMSF.
Concentration	1mg/ml (determined by Bradford assay).
Storage	Can be stored at +4°C short term (1-2 weeks). For long term storage, aliquot and store at -20°C or -70°C. Avoid repeated freezing and thawing cycles.

GENE INFORMATION

Gene Name	GSS glutathione synthetase [Homo sapiens]
Synonyms	GSS; GSHS; MGC14098; GSS; EC 6.3.2.3; GSH synthetase; glutathione synthase
Gene ID	2937
mRNA Refseq	NM_000178
Protein Refseq	NP_000169
MIM	601002
UniProt ID	P48637
Chromosome Location	20q11.2

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Pathway	Glutathione metabolism; Metabolic pathways; Biological oxidations
Function	glutathione binding; glutathione synthase activity; glycine binding; nucleotide binding; protein homodimerization activity

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