

# Recombinant human GMPS protein

Catalog Number: ATGP1403

## PRODUCT INFORMATION

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**Expression system**

E.coli

**Domain**

1-693aa

**UniProt No.**

P49915

**NCBI Accession No.**

NP\_003866

**Alternative Names**

GMP synthase [glutamine-hydrolyzing], Glutamine amidotransferase, guanine monophosphate synthetase

## PRODUCT SPECIFICATION

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**Molecular Weight**

79.2 kDa (717aa)

**Concentration**

0.5mg/ml (determined by Bradford assay)

**Formulation**

Liquid in. 20mM Tris-HCl buffer (pH 8.0) containing 1mM DTT, 30% glycerol, 0.1M NaCl

**Purity**

> 90% 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**

GMP synthase, also known as GMPS, is involved in purine biosynthesis. Existing as a homodimer, GMPS catalyzes the last step in the GMP synthesis pathway, namely the ATP-dependent amination of XMP to GMP. GMPS contains one GMP-binding domain and one glutamine amidotransferase type-1 domain through which it conveys its catalytic activity. Chromosomal translocations involving the gene encoding GMPS are associated with acute myeloid leukemias, suggesting a possible role for GMPS in carcinogenesis. Recombinant human GMPS protein, fused to His-tag at N-terminus, was expressed in E. coli and purified by using conventional chromatography

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techniques.

## Amino acid Sequence

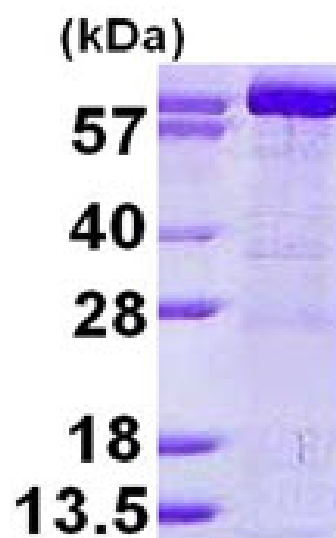
<MGSSHHHHHH SSGLVPRGSH MGS>MALCNG DSKLENAGGD LKDGHHHYEG AVVILDAGAQ YGKVIDRRVR  
ELFVQSEIFP LETPAFAIKE QGFRAIIISG GPNSVYAEDA PWFDPAIFTI GKPVLGICYG MQMMNKVFGG TVHKKSVRED  
GVFNISVDNT CSLFRGLQKE EVVLLTHGDS VDKVADGFKV VARSGNIVAG IANESKKLYG AQFHPEVGLT ENGVILKNF  
LYDIAGCSGT FTVQNRELEC IREIKERVGT SKVLVLLSGG VDSTVCTALL NRALNQEVI AVHIDNGFMR KRESQSVEEA  
LKKLGIQVKV INAAHSFYNG TTTLPISEDED RTPRKRIKT LNMTTSPEEK RKIIGDTFVK IANEVIGEMN LKPEEVFLAQ  
GTLRPDLIES ASLVASGKAE LIKTHNDTE LIRKLREEGK VIEPLKDFHK DEVRILGREL GLPEELVSRH PFPGPGLAIR  
VICAEEPIC KDFPETNNIL KIVADFSASV KKPHTLLQRV KACTTEEDQE KLMQITSLHS LNAFLLLPIKT VGVQGDGRSY  
SYVCGISSKD EPDWESLIFL ARLIPRMCHN VNRVVIYFGP PVKEPPTDVT PTFLTGGVLS TLRQADFEAH NILRESGYAG  
KISQMPVILT PLHFDRDPLQ KQPSCQRSVV IRTFITSDFM TGIPATPGNE IPVEVVLKMV TEIKKIPGIS RIMYDLTSKP PGTEWE

## General References

Hirst M., et al. (1994) J Biol Chem. 269:23830-23837.  
Nakamura J., et al. (1995) J Biol Chem. 270:23450-23455.

## DATA

### SDS-PAGE



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

15% SDS-PAGE (3ug)