

Recombinant human GMP synthase/GMPS protein

Catalog Number: ATGP1403

PRODUCT INFORMATION

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

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

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

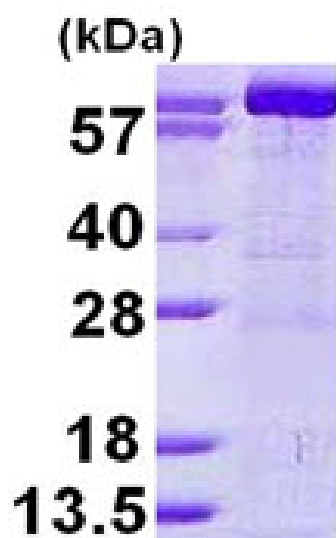
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GVFNISVDNT CSLFRGLQKE EVVLLTHGDS VDKVADGFKV VARSGNIVAG IANESKKLYG AQFHPEVGLT ENGVILKNF
LYDIAGCSGT FTVQNRELEC IREIKERVGT SKVLVLLSGG VDSTVCTALL NRALNQEVI AVHIDNGFMR KRESQSVEEA
LKKLGIQVKV INAAHSFYNG TTTLPISDED RTPRKRIKT LNMTTSPEEK RKIIGDTFVK IANEVIGEMN LKPEEVFLAQ
GTLRPDLIES ASLVASGKAE LIKTHHNDTE 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)