
Product Data Sheet

Product Name: GMPS Human

Cat. No.: GP21701

Batch No.: 1

Product Data

Purity	>98%	Source	Escherichia Coli.
Physical Appearance	solid	Shipping Condition	Shipped with Ice Packs.
Synonyms	GMP synthase [glutamine-hydrolyzing]; GMP synthetase; Glutamine amidotransferase; GMPS; GMP synthase; guanosine 5'-monophosphate synthase; MLL/GMPS fusion protein.		
Amino Acid Sequence	<p>MGSSHHHHHH SGLVPRGSH MGSHMALCNG DSKLENAGGD LKDGHHHYEG AVVILDAGAQ YGKVIDRRVR ELFVQSEIFP LETPAFAIKE QGFRAIIISG GPNSVYAEDA PWFDP AIFTI GKPVLGICYG MQMMNKVFGG TVHKKSVRED GVFNISVDNT CSLFRGLQKE EVLLTHGDS VDKVADGFKV VARSGNIVAG IANESKKLYG AQFHPEVGLT ENKGVILKNF LYDIAGCSGT FTVQNRELEC IREIKERVGT SKVLVLLSGG VDSTVCTALL NRALNQEVI AVHIDNGFMR KRESQSVEEA LKKLGIQVKV INAAHSFYNG TTTLPISEDED RTPRKRISKT LNMTTSPEEK RKIIGDTFVK IANEVIGEMN LKPEEVFLAQ GTLRPDLIES ASLVASGKAE LIKTHHNDTE LIRKLREEGK VIEPLKDFHK DEVRILGREL GLPEELVSRH PFPGPGLAIR VICAPEPYIC KDFPETNNIL KIVADFSASV KKPHTLLQRV KACTTEEDQE KLMQITSLHS LNAFLPIKT VGVQGDRCRSY SYVCGISSKD EPDWESLIFL ARLIPRMCHN VNRVVYIFGP PVKEPPTDVT PTFLTGGVLS TLRQADFEAH NILRESGYAG KISQMPVILT PLHFDRDPLQ KQPSCQRSVW IRTFITSDFM TGIPATPGNE IPVEVVLKVM TEIKKIPGIS RIMYDLTSKP PGTTEWE.</p>		
Formulation	The GMPS solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 30% glycerol and 0.1M NaCl.		

Introduction

GMP synthase (GMPS) is involved in purine biosynthesis. GMPS, which is a homodimer, catalyzes the last step in the GMP synthesis pathway, specifically the ATP-dependent amination of XMP to GMP. GMPS is comprised of one GMP-binding domain and one

Caution: Product has not been fully validated for medical applications. For research use only.

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glutamine amidotransferase type-1 domain through which it communicates its catalytic activity. GMPS is engaged in the de novo synthesis of nucleotides which are not only vital for DNA and RNA synthesis, but also supply GTP, which is involved in several cellular processes important for cell division. GMPS gene chromosomal translocations are linked with acute myeloid leukemias, suggesting a possible role for GMPS in carcinogenesis.

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.

Background

GMPS Human Recombinant produced in E.coli is a single, non-glycosylated polypeptide chain containing 717 amino acids (1-693) and having a molecular mass of 79.2kDa. GMPS is fused to a 24 amino acid His-tag at N-terminus & purified by proprietary chromatographic techniques.

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