

## GMPS Human

**Description:** 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.

Catalog #: ENPS-251

For research use only.

**Synonyms:** GMP synthase [glutamine-hydrolyzing], GMP synthetase, Glutamine amidotransferase, GMPS, Guanine monophosphate synthetase, GMP synthase, guanosine 5'-monophosphate synthase, MLL/GMPS fusion protein.

**Source:** Escherichia Coli.

**Physical Appearance:** Sterile Filtered colorless solution.

**Amino Acid Sequence:** MGSSHHHHHH SSGLVPRGSH MGSHMALCNG DSKLENAGGD  
LKDGHHHYEG AVVILDAGAQ YGKVIDRRVR ELVQSEIFP LETPAFAIKE QGFRAIISG  
GPNSVYAEDA PWFDP AIFTI GKPVLGICYG MQMMNKVFGG TVHKKSVRED GVFNISVDNT  
CSLFRGLQKE EVVLLTHGDS VDKVADGFKV VARSGNIVAG IANESKKLYG AQFHPEVGLT  
ENGVILKNF LY

**Purity:** Greater than 90.0% as determined by SDS-PAGE.

### Formulation:

The GMPS solution (0.5mg/ml) contains 20mM Tris-HCl buffer (pH 8.0), 1mM DTT, 30% glycerol and 0.1M NaCl.

### 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.

### Usage:

NeoBiolab's products are furnished for LABORATORY RESEARCH USE ONLY. The product may not be used as drugs, agricultural or pesticidal products, food additives or household chemicals.

### 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 glutamine amidotransferase type-1 domain through which it communicates its catalytic activity. GMPS is engaged in the de novo synthesis of guanine 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.

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