www.neobiolab.com
info@neobiolab.com
888.754.5670, +1 617.500.7103 United States
0800.088.5164, +44 020.8123.1558 United Kingdom

GMPS Human

Catalog #:ENPS-251

For research use only.

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.

Synonyms:GMP synthase [glutamine-hydrolyzing], GMP synthetase, Glutamine amidotransferase, GMPS, Guanine monphosphate 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 ELFVQSEIFP LETPAFAIKE QGFRAIIISG GPNSVYAEDA PWFDPAIFTI GKPVLGICYG MQMMNKVFGG TVHKKSVRED GVFNISVDNT CSLFRGLQKE EVVLLTHGDS VDKVADGFKV VARSGNIVAG IANESKKLYG AQFHPEVGLT ENGKVILKNF 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 drµgs, 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 throµgh 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 sevral cellular processes important for cell division. GMPS gene chromosomal translocations are linked with acute myeloid leukemias, sµggesting a possible role for GMPS in carcinogenesis.

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