

Product datasheet for **RG204267**

GMP Synthase (GMPS) (NM_003875) Human Tagged ORF Clone

Product data:

| | |
|---------------------------|--|
| Product Type: | Expression Plasmids |
| Product Name: | GMP Synthase (GMPS) (NM_003875) Human Tagged ORF Clone |
| Tag: | TurboGFP |
| Symbol: | GMPS |
| Synonyms: | GATD7 |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-AC-GFP (PS100010) |
| E. coli Selection: | Ampicillin (100 ug/mL) |



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ORF Nucleotide
Sequence:

>RG204267 representing NM_003875
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGGCTCTGTGCAACGGAGACTCCAAGCTGGAGAATGCTGGAGGAGACCTTAAGGATGGCCACCACCACT
ATGAAGGAGCTGTTGTCATTCTGGATGCTGGTGCCTCAGTACGGGAAAGTCATAGACCGAAGAGTGAGGGA
ACTGTTCTGTCAGTCTGAAATTTCCCTTGAAACACCAGCATTGCTATAAAGGAACAAGGATCCGT
GCTATTATCATCTCTGGAGGACCTAATTCTGTGTATGCTGAAGATGCTCCCTGGTTTGATCCAGCAATAT
TCACTATTGGCAAGCCTGTTCTTGGAAATTTGCTATGGTATGCAGATGATGAATAAGGATTTGGAGGTAC
TGTGCACAAAAAAGTGTGAGAGAAGATGGAGTTTTCAACATTAGTGTGGATAATACATGTTTATTATTC
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TGCCAGAGATCTGTGGTTATTGCAACCTTTATTACTAGTGACTTCATGACTGGTATACCTGCAACACCTG
GCAATGAGATCCCTGTAGAGGTGGTATTAAGATGGTCACTGAGATTAAGAAGATTCTGGTATTTCTCG
AATTATGTATGACTTAACATCAAAGCCCCAGGAACTACTGAGTGGGAG

ACGCGTACGCGGCCGCTCGAG – GFP Tag – GTTTAA

Protein Sequence: >RG204267 representing NM_003875
 Red=Cloning site Green=Tags(s)

MALCNGDSKLENAGGDLKDGHHHYEGAVVILDAGAQYGVKVIDRRVRELFVQSEIFPLETPAFAIKEQGFR
 AIIISGGPNSVYAEDAPWFDPAIFTIGKPVLGICYGMQMMNKVFGGTVHKKSVDREMGVFNISVDNTCSLF
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 AGCSGFTVQNRELECIKEIKERVGTSKVLVLLSGVDSTVCTALLNRALNQEQVI AVHIDNGFMRKRES
 QSVEEALKKLGIVKVINAAHSFYNGTTTLPISDEDRTPRKRISKTLNMTTSPEEKRKIIIGDTFVKIANE
 VIGEMNLKPEEVFLAQGTLRDLIESASLVASGKAEIKTHHNDTELIRKLEEGKVIEPLKDFHKDEV
 ILGRELGLPEELVSRHPFPGPLAIRVICAEEPYICKDFPETNNILKIVADFSASVKKPHTLLQRVKACT
 TEEDQEKLMTITSLHSLNAFLPIKTVGVQGDCRSYSYVCGISSKDEPDWESLIFLARLIPRMCHNVNRV
 VYIFGPPVKEPPTDVTPTFLT TTVGLSTLRQADFEAHNILRESGYAGKISQMPVIL TPLHFDRLPLQKQPS
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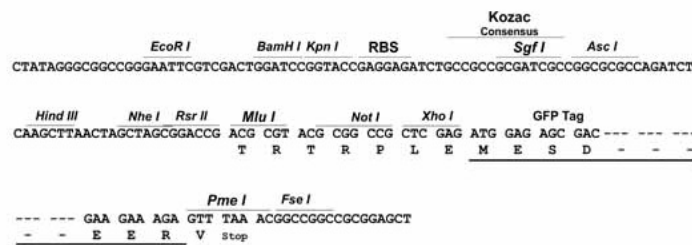
TRTRPLE - GFP Tag - V

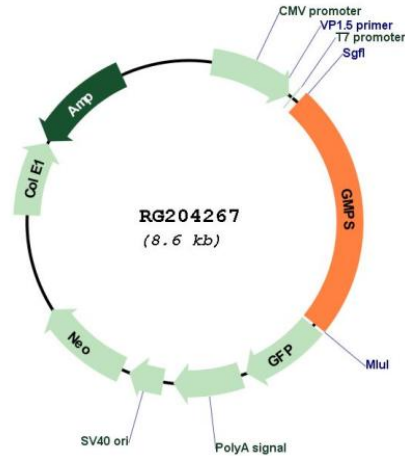
Restriction Sites:

SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



Plasmid Map:


ACCN: NM_003875

ORF Size: 2079 bp

OTI Disclaimer: The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

Components: The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

Reconstitution Method:

1. Centrifuge at 5,000xg for 5min.
2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
3. Close the tube and incubate for 10 minutes at room temperature.
4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.
5. Store the suspended plasmid at -20°C. The DNA is stable for at least one year from date of shipping when stored at -20°C.

RefSeq: [NM_003875.3](#)

RefSeq Size: 2457 bp

| | |
|-------------------|--|
| RefSeq ORF: | 2082 bp |
| Locus ID: | 8833 |
| UniProt ID: | P49915 |
| Cytogenetics: | 3q25.31 |
| Domains: | GATase, GMP_synt_C |
| Protein Families: | Stem cell - Pluripotency |
| Protein Pathways: | Drug metabolism - other enzymes, Metabolic pathways, Purine metabolism |
| Gene Summary: | In the de novo synthesis of purine nucleotides, IMP is the branch point metabolite at which point the pathway diverges to the synthesis of either guanine or adenine nucleotides. In the guanine nucleotide pathway, there are 2 enzymes involved in converting IMP to GMP, namely IMP dehydrogenase (IMPD1), which catalyzes the oxidation of IMP to XMP, and GMP synthetase, which catalyzes the amination of XMP to GMP. [provided by RefSeq, Jul 2008] |