

Product datasheet for **RG209012**

Folylpolyglutamate synthase (FPGS) (NM_004957) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Folylpolyglutamate synthase (FPGS) (NM_004957) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	Folylpolyglutamate synthase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



[View online »](#)

ORF Nucleotide Sequence:

>RG209012 representing NM_004957
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGC**C

ATGTCGCGGGCGCGGAGCCACCTGCGCGCCGCTCTATTCTGGCAGCGGCGTCTGCGCGCGGCGTAAACGA
 CCCAGGTCGCGGGCGGGGGCTTGAGCGCTGGCCGGTGCCGAGGAGCCGAGCATGGAGTACCAGGA
 TGCCGTGCGCATGCTCAATACCCTGCAGACCAATGCCGGTACCTGGAGCAGGTGAAGCGCCAGCGGGT
 GACCCTCAGACACAGTTGGAAGCCATGGAAGTGTACCTGGCAGGAGTGGGCTGCAGGTGGAGGACTTGG
 ACCGGTGAACATCATCCAGTCACTGGGACGAAGGGGAAGGGCTCCACCTGTGCCTTACGGAATGTAT
 CCTCCGAAGCTATGGCCTGAAGACGGGATCTTTAGCTCTCCCCACCTGGTGCAGGTTGGGAGCGGATC
 CGCATCAATGGGAGCCCATCAGTCTGAGCTCTTACCAAGTACTTCTGGCGCCTTACCACCGGCTGG
 AGGAGACCAAGGATGGCAGCTGTGTCTCCATGCCCCCTACTTCCGCTTCTGACTCATGGCCTTCCA
 CGTCTTCTCCAAGAGAAGGTGGACCTGGCAGTGGTGGAGGTGGGCAATTGGCGGGCTTATGACTGCACC
 AACATCATCAGGAAGCCTGTGGTGTGGGAGTCTCCTCTCTTGGCATCGACCACACCAGCCTCCTGGGGG
 ATACGGTGGAGAAGATCGCATGGCAGAAAGGGGGCATCTTAAAGCAAGGTGTCCCTGCCTTCACTGTGCT
 CCAACCTGAAGGTCCCCTGGCAGTGTGAGGGACCGAGCCAGCAGATCTCATGTCTTATACCTGTGT
 CCGATGCTGGAGGCCCTCGAGGAAGGGGGCCGCCGCTGACCCTGGGCCTGGAGGGGAGACCAGCGGT
 CCAACGCCGCTTGGCCTTGAGCTGGCCACTGCTGGTGCAGCGGCAGGACCGCCATGGTGTGGGGA
 GCCAAAGGCATCCAGGCCAGGGCTCCTGTGGCAGTGGCCCTGGCACCTGTGTTCCAGCCACATCCCAC
 ATGCGGCTCGGGCTTGGAAACACGGAGTGGCCGGCCGAGCAGGTGCTGCGCGCGGGCCCTCACCT
 GGTACCTGGACGGTGGCACACCGCCAGCAGCGCAGGCTGCGTGGCTGGTTCGCGCGGGCCCTGCA
 GGGCCGCGAGAGCCGAGCGGTGGCCCGAGGTTTCGAGTCTTCTCAATGCTACCGGGGACCGGGAC
 CCGCGCGCCCTGCTGAAGCTGCTGCAGCCCTGCCAGTTTGACTATGCCGTCTTCTGCCCTAACCTGACAG
 AGGTGTATCCACAGGCAACGCAGACCAACAGAACTTACAGTGACACTGGACCAGGTCCTGCTCCGCTG
 CCTGGAACACCAGCAGCACTGGAACCACCTGGACGAAGAGCAGGCCAGCCGGACCTTGGAGTGTCCCC
 AGCCCAGAGCCCGGTGGTCCGCATCCCTGCTTGGCGCCCCACCCACCCACACTGCAGTGCCAGCT
 CCCTCGTCTTCACTGCATTTACATGCCTTGAATGGATCAGCAAGGCCGAGACCCCATCTTCCAGCC
 ACCTAGTCCCCAAAGGGCTCCTCACCCACCTGTGGCTCACAGTGGGGCCAGCATACTCCGTGAGGCT
 GCTGCCATCCATGTGCTAGTCACTGGCAGCCTGCACCTGGTGGTGGTGTCTGAAGCTGCTGGAGCCCG
 CACTGTCCAG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

Protein Sequence:

>RG209012 representing NM_004957
 Red=Cloning site Green=Tags(s)

MSRARSHLRAALFLAAASARGVTTQVAARRGLSAWPVQEPSMEYQDAVRMLNLTQTNAGYLEQVKRQRG
 DPQTQLEAMELYLARSGLQVEDLDRLNIHVTGTGKGGSTCAFTECILRSYGLKTGFFSSPHLVQVRERI
 RINGQPI SPELFTKYFWRLYHRL EETKDGSCVSMPPYFRFLTLM AFHVFLQEKVDLAVVEVGIGGAYDCT
 NIIRKPVVCGVSSLGIDHTSLLGDTVEKIAWQKGGIFKQGVPAFTVLQPEGPLAVLRDRAQIISPLYL
 CPMLEALEEGPPLTLGLEGEHQRSNAALALQLAHCWLQRDRHGAGEPKASRPGLLWQLPLAPVVFQPTSH
 MRLGLRNTEWPGRTQVLRGRLTWYLDGAHTASSAQACVRWFRQALQGRERPSGGPEVRVLLFNATGDRD
 PAALLKLLQPCQFDYAVFCPNL TEVSSTGNADQNFVTLDQVLLRCLHQQHWNHLDEEQASPDLSVP
 SPEPGGSASLLLAPHPHTCSASSLVFSCISHALQWISQGRDPIFQPPSPKGLLTHPVAHSGASILREA
 AAIHVLVTGSLHLVGGVLLLEPALSQ

TRTRPLE - GFP Tag - V

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_004957

ORF Size: 1761 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_004957.3](#)

RefSeq Size: 2487 bp

RefSeq ORF: 1764 bp

Locus ID: 2356

UniProt ID: [Q05932](#)

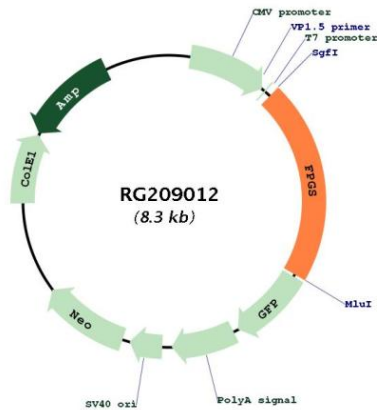
Cytogenetics: 9q34.11

Domains: Mur_ligase_C

Protein Pathways: Folate biosynthesis, Metabolic pathways

Gene Summary: This gene encodes the folylpolyglutamate synthetase enzyme. This enzyme has a central role in establishing and maintaining both cytosolic and mitochondrial folylpolyglutamate concentrations and, therefore, is essential for folate homeostasis and the survival of proliferating cells. This enzyme catalyzes the ATP-dependent addition of glutamate moieties to folate and folate derivatives. Alternative splicing results in transcript variants encoding different isoforms. [provided by RefSeq, Jan 2014]

Product images:



Circular map for RG209012