

## Product datasheet for **RC211662**

### Folypolyglutamate synthase (FPGS) (NM\_001018078) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	Folypolyglutamate synthase (FPGS) (NM_001018078) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Folypolyglutamate synthase
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



[View online »](#)

**ORF Nucleotide Sequence:**

>RC211662 representing NM\_001018078  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGCTCAATACCCTGCAGACCAATGCCGGTACCTGGAGCAGGTGAAGCGCCAGCGGGGTGACCCTCAGA  
 CACAGTTGGAAGCCATGGAAGTGTACCTGGCACGGAGTGGGCTGCAGGTGGAGGACTTGGACCGGCTGAA  
 CATCATCCACGCTCACTGGGACGAAGGGGAAGGGTCCACCTGTGCCTTACGGAATGTATCCTCCGAAGC  
 TATGGCCTGAAGACGGGATTCTTTAGCTCTCCCCACCTGGTGCAGGTTCCGGGAGCGGATCCGCATCAATG  
 GGCAGCCCATCAGTCTGAGCTCTTACCAAGTACTTCTGGCGCCTTACCACCGGCTGGAGGAGACCAA  
 GGATGGCAGTGTGTCTCCATGCCCCCTACTTCCGCTTCTGACACTCATGGCCTTCCACGTCTTCTCTC  
 CAAGAGAAGGTGGACCTGGCAGTGGTGGAGGTGGGCATTTGGCGGGCTTATGACTGCACCAACATCATCA  
 GGAAGCCTGTGGTGTGGGAGTCTCTCTCTTGGCATCGACCACACCAGCCTCTGGGGGATACGGTGGAA  
 GAAGATCGCATGGCAGAAAGGGGCATCTTTAAGCAAGGTGTCCCTGCCTCACTGTGCTCAACCTGAA  
 GGTCCCTGGCAGTGTGAGGGACCGAGCCAGCAGATCTCATGTCTCTATACTGTGTCCGATGCTGG  
 AGGCCCTCGAGGAAGGGGGCCCGCTGACCCCTGGGCCTGGAGGGGAGCACCAGCGGTCCAACGCCGC  
 CTTGGCCTTGAGCTGGCCACTGCTGGCTGCAGCGCAGGACCGCCATGGTGTGGGGAGCCAAAGGCA  
 TCCAGGCCAGGGCTCTGTGGCAGTGGCCCTGGCACCTGTGTTCCAGCCACATCCCACATGCGGCTCG  
 GGCTTCGGAACACGGAGTGGCCGGGCGGACGCAGGTGCTGCGGCGCGGGCCCTCACCTGGTACCTGGA  
 CGGTGCGCACACCGCCAGCAGCGCGCAGGCTGCGTGCCTGTTCCGCCAGGCGCTGCAGGGCCGCGAG  
 AGGCCGAGCGGTGGCCCCGAGGTTGAGTCTTGTCTTCAATGCTACCGGGACCGGGACCCGGCGGCC  
 TGCTGAAGTGTGACGCCCTGCCAGTTGACTATGCCGTCTTCTGCCCTAACCTGACAGAGGTGCATC  
 CACAGGCAACGCAGACCAACAGAACTTACAGTACACTGGACAGGTCCTGCTCCGCTGCCTGGAACAC  
 CAGCAGCACTGGAACACCTGGACGAAGAGCAGGCCAGCCGGACCTCTGGAGTGCCCCAGCCAGAGC  
 CCGGTGGTCCGCATCCCTGCTTCTGGCGCCCCACCCACCCACACTGCAGTGCAGCTCCCTCGTCTT  
 CAGCTGCATTTACATGCCTTGAATGGATCAGCCAAGGCCGAGACCCCATCTTCCAGCCACCTAGTCCC  
 CCAAAGGGCCTCCTACCCACCCTGTGGCTCACAGTGGGGCCAGCATACTCCGTGAGGCTGCTGCCATCC  
 ATGTGCTAGTCACTGGCAGCCTGCACCTGGTGGTGGTGTCTGAAGTGTGGAGCCCGCACTGTCCCA  
 G

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC211662 representing NM\_001018078  
 Red=Cloning site Green=Tags(s)

MLNTLQTNAGYLEQVKRQRGDPQTQLEAMELYLARSLQVEDLDRLNIIHVTGKKGSTCAFTECILRS  
 YGLKTGFFSSPHLVQVRERIRINGQPI SPELFTKYFWRLYHRL EETKDGSCVSMPPYFRFLTMAFHVFL  
 QEKVDLAVVEVGI GGAYDCTNIIRKPVVCGVSSLGIDHTSLLGDTVEKIAWQKGGIFKQGVPAFTVLQPE  
 GPLAVLRDRAQQISCPYLCPMLEALEEGPPLTLGLEGEHQRSNAALALQLAHCWLQRQDRHGAGEPKA  
 SRPGLLWQLPLAPVFQPTSHMRLGLRNTEWPGRTQVLRGPTWYLDGAHTASSAQCVRWRFRALQGRE  
 RPSGGPEVRVLLFNATGDRDPAALLKLLQPCQFDYAVFCPNL TEVSSSTGNADQQNFVTVLDQVLLRCLH  
 QQHWNHLDEEQASPDLSAPSPEPGGSASLLLAPHPPHTCSASSLVFSCISHALQWISQGRDPIFQPPSP  
 PKGLLTHPVAHSGASILREAAAIHVLVTGSLHLVGGVLKLLLEPALSQ

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8107\\_e04.zip](https://cdn.origene.com/chromatograms/mk8107_e04.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**



**ACCN:** NM\_001018078

**ORF Size:** 1611 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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.

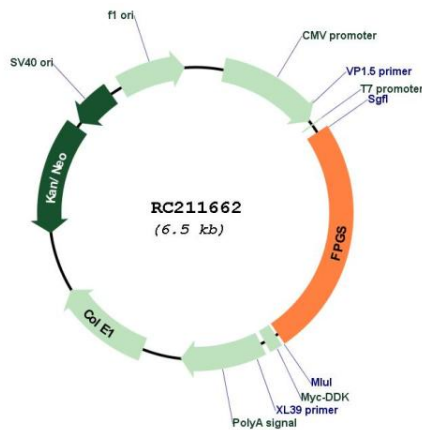
**Components:** The ORF clone is ion-exchange column purified and shipped in a 2D barcoded Matrix tube containing 10ug of transfection-ready, dried plasmid DNA (reconstitute with 100 ul of water).

- 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.

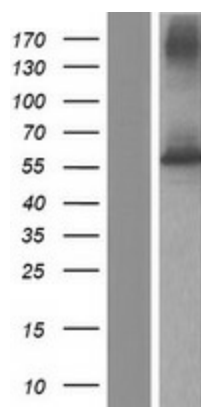
RefSeq: [NM\\_001018078.2](#)  
 RefSeq Size: 2475 bp  
 RefSeq ORF: 1614 bp  
 Locus ID: 2356  
 UniProt ID: [Q05932](#)  
 Cytogenetics: 9q34.11  
 Protein Pathways: Folate biosynthesis, Metabolic pathways  
 MW: 59 kDa

**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 RC211662



Western blot validation of overexpression lysate (Cat# [LY422729]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211662 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).