

Product datasheet for **RC207735**

Translation factor GUF1, mitochondrial (GUF1) (NM_021927) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Translation factor GUF1, mitochondrial (GUF1) (NM_021927) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	Translation factor GUF1, mitochondrial
Synonyms:	DEE40; EF-4; EF4; EIEE40
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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ORF Nucleotide Sequence:

>RC207735 ORF sequence

Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGCATCGC**

ATGTGGACCCCTCGTGGGTCGGGGCTGGGGGTGCGCACGCGCTCTCGGCCACGAGCCACTGGGGCCGCGC
TTCTGGTGGCCCCGGGGCCCCGGTCCGCGCCGACCCTTGGGGCTGCTCCAGAGTCCCTGGGTACCGACAG
GCTCTACAGCTCCGCGAATTCAAGGAAAACTTGACATGTCTAGGTTTCTGTTGAAAAATTAGAAAT
TTCAGTATTGTTGCACACGTGGATCATGGCAAAAGTACTTTAGCTGACAGGCTCCTAGAATTACAGGGA
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ATCGGTAATCCAGTTATAAATAAGATAGATCTGAAGAATGCTGATCCTGAAAGGTTGAAAACCAATT
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GGTATTTGACTCCACCTTTGACCAGTATAGAGGTGTGATAGCCAATGTAGCATTATTTGACGGAGTGGT
TCCAAAGGAGATAAAATTGTATCTGCACATACTCAAAAGACATACGAAGTTAATGAAGTAGGAGTCTTGA
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GTGCTATAGAAAACTGACTTTAAATGATTCCAGTGTGACCGTTTCATCGGGATAGTAGCCTTGCTCTGGG
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AACGGCTGAAGGATTCTCTTCTAGGCAACTGTTTGAGATAGCAATTCAAGCTGCTATTGGAAGTAAAT
CATTGCAAGAGAACTGTGAAAGCCTATAGGAAAAACGTTTTGGCAAAATGTTATGGTGGTGATATTACC
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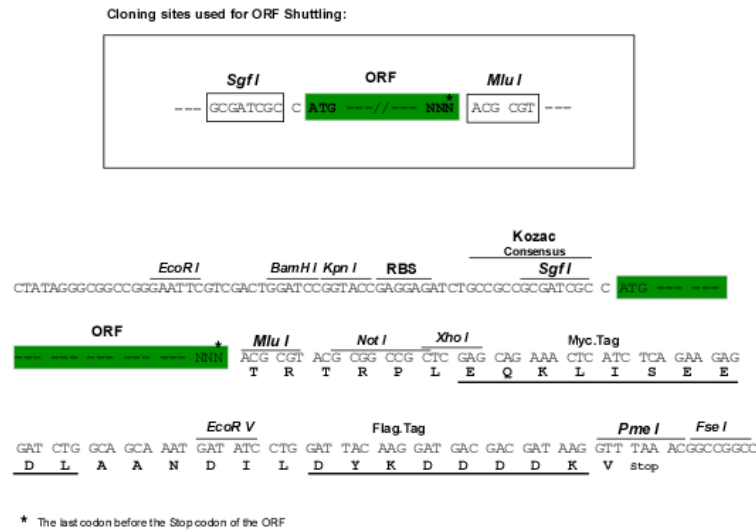
ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC207735 protein sequence
 Red=Cloning site Green=Tags(s)

MWTLVGRGWGCARALAPRATGAALLVAPGPRSAPTGLGAAPESWATDRLYSSAEFKEKLDMSRFPVENIRN
 FSIVAHVDHGKSTLADRLELTGTIDKTKNNKQVLDKLQVERERGITVKAQTASLFYNCEGKQYLLNLID
 TPGHVDVFSYEVSRSLACQGVLLVVDANEGIQATVANFFLAFAQLSVIPVINKIDLKNADPERVENQI
 EKVFDPISDECIKISAKLGTNVESVLQAIIERIPPPKVHRKNPLRALVFDSTFDQYRGVIANVALFDGVV
 SKGDKIVSAHTQKTYEVNEVGVLNPNEQPTHKLYAGQVGYLIAGMKDVTEAQIGDTLCLHKQPVEPLPGF
 KSAKPMVFAGMYPLDQSEYNNLKSATIEKLTLDSSVTVHRDSSLALGAGWRLGFLGLHMEVFNQRLEQE
 YNASVILTTPTVPYKAVLSSSKLIKEHREKEITIIINPAQFPDKSKVTEYLEPVLGTIITPDEYTGKIMM
 LCEARRAVQKNMIFIDQNRVMLKYLFLPLNEIVDFYDSLKSLSSGYASFYEDAGYQTAELVKMDILLNG
 NTVEELVTVVHKDKAHSIGKAICERLKDLSLPRQLFEIAIQAAIGSKIIARETVKAYRKNVLAKCYGGDIT
 RKMKLLKRQAEGKKLRLKIGNVEVPKDAFIKVLKTQSSK

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6694_h06.zip
 Restriction Sites: Sgfl-MluI
 Cloning Scheme:



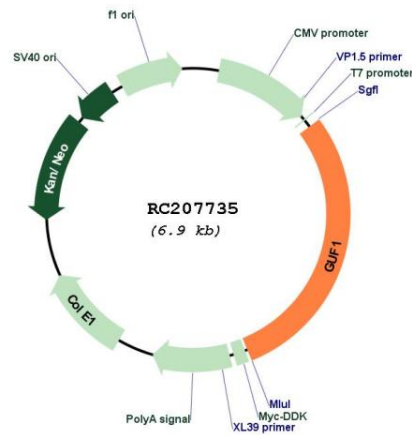
ACCN: NM_021927
 ORF Size: 2007 bp

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 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_021927.3
RefSeq Size:	4230 bp
RefSeq ORF:	2010 bp
Locus ID:	60558
UniProt ID:	Q8N442
Cytogenetics:	4p12
Domains:	EFG_C, GTP_EFTU, GTP_EFTU_D2
MW:	74.3 kDa

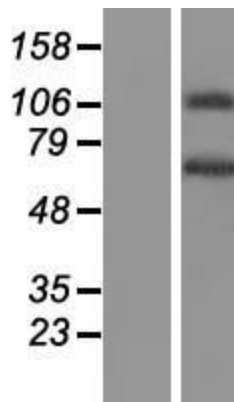
Gene Summary:

This gene encodes a GTPase that triggers back-translocation of the elongating ribosome during mitochondrial protein synthesis. The protein contains a highly conserved C-terminal domain not found in other GTPases that facilitates tRNA binding. The encoded protein is thought to prevent misincorporation of amino acids in stressful, suboptimal conditions. An allelic variant in this gene has been associated with early infantile epileptic encephalopathy-40. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Sep 2016]

Product images:



Circular map for RC207735



Western blot validation of overexpression lysate (Cat# [LY411893]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC207735 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).