

## Product datasheet for **RG224225**

### MRPL21 (NM\_181514) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** MRPL21 (NM\_181514) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** MRPL21  
**Synonyms:** L21mt; MRP-L21  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG224225 representing NM\_181514  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAACTACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGATCGCC

ATGGCAGCATCTTCCTGACGGTCACCTTAGGGCGGCTGGCGTCCGCGTGCAGCCACAGCATCCTGAGAC  
CTTCGGGGCCCGGAGCAGCCTCCCTTTGGTCTGCTTCTCGAAGGTTCAATTCACAGAGCACTTCATATCT  
ACCAGGATATGTTCTAAACATCCCTGAGTTCACCACTTGGCCAGAAGTTGTTCTGCCAGACCCAGTT  
GAGGAGACCAGACACCATGCAGAGGTCGTGAAGAAGGTGAATGAGATGATCGTCACGGGGCAGTATGGCA  
GGCTCTTTGCCGTGGTGCACCTTTGCCAGCCGCCAGTGGAAGGTGACCTCTGAAGACCTGATCTTAATTGG  
AAATGAACTAGACCTTGGTGTGGAGAGAGAATTCGACTGGAGAAGGTCCTGCTGTTGGGCAGACAAC  
TTCACGCTGCTTGGCAAGCCACTCCTCGAAAGGATCTTGTTTCGAGTAGAAGCCACAGTCATTGAAAAGA  
CAGAATCATGGCCAAGAATCATTATGAGATTGAGAAAAGGAAAACTTCAAGAAGAAAAGAAATCGTCAC  
GACCCCGCAGACTGTCTCCGGATAAACAGCATTGAGATTGCTCCGTGTTTGTG

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:** >RG224225 representing NM\_181514  
Red=Cloning site Green=Tags(s)

MAASSLTVTLGRLASACSHSILRPSGPGAASLWSASRRFNSQSTSYPGYVPKTSLSPPWPPEVLPDPV  
 EETRHAEVVKVNMIVTGQYGRLLFAVVFASRQWKVTSEDLILIGNELDLACGERIRLEKVLVVGADN  
 FTLLGKPLLKDLVRVEATVIEKTESWPRIIMRFRKRKNFKKRIVTTPQTVLRINSIEIAPCLL

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI



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**Cloning Scheme:**


**ACCN:** NM\_181514

**ORF Size:** 615 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.

**Note:** Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

**RefSeq:** [NM\\_181514.2](#)

**RefSeq Size:** 713 bp

**RefSeq ORF:** 618 bp

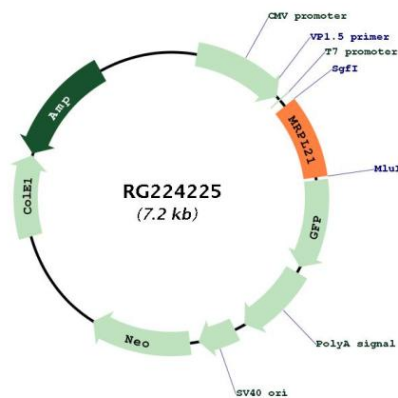
**Locus ID:** 219927

UniProt ID: [Q7Z2W9](#)

Cytogenetics: 11q13.3

**Gene Summary:** Mammalian mitochondrial ribosomal proteins are encoded by nuclear genes and help in protein synthesis within the mitochondrion. Mitochondrial ribosomes (mitoribosomes) consist of a small 28S subunit and a large 39S subunit. They have an estimated 75% protein to rRNA composition compared to prokaryotic ribosomes, where this ratio is reversed. Another difference between mammalian mitoribosomes and prokaryotic ribosomes is that the latter contain a 5S rRNA. Among different species, the proteins comprising the mitoribosome differ greatly in sequence, and sometimes in biochemical properties, which prevents easy recognition by sequence homology. This gene encodes a 39S subunit protein. Multiple transcript variants encoding different isoforms were identified through sequence analysis although some may be subject to nonsense-mediated decay (NMD). [provided by RefSeq, Jul 2008]

## Product images:



Circular map for RG224225