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Product datasheet for RG222489

MRPS12 (NM_021107) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MRPS12 (NM_021107) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	MRPS12
Synonyms:	MPR-S12; MT-RPS12; RPMS12; RPS12; RPSM12
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG222489 representing NM_021107 Red=Cloning site Blue=ORF Green=Tags(s) TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC GCCGCGATCGCC ATGTCCTGGTCTGGCCTTCTCCATGGCCTCAACACGTCCCTAACTTGTGGCCCAGCTCTGGTTCCCCGGC TCTGGGCTACCTGCTCCATGGCTACCCTGAACCAGATGCACCGCCTGGGGCCCCCCAAGCGGCCGCCTCG GAAGCTGGGCCCCACGGAAGGCCGGCCGCAGCTGAAGGGTGTGGTCCTGTGCACGTTTACCCGCAAGCCG AAGAAGCCCAACTCAGCCAATCGCAAGTGCTGTCGAGTGCGGCTCAGCACTGGCCGCGAGGCCGTCTGCT TCATCCCTGGGGAGGGCCACACCCTGCAGGAGCACCAGATTGTCCTTGTGGAGGGCGGCCGCACCCAGGA CCTGCCAGGCGTCAAGCTCACCGTTGTGCGTGGCAAGTACGACTGTGGCCACGTGCAGAAGAAG ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA
Protein Sequence:	>RG222489 representing NM_021107 Red=Cloning site Green=Tags(s) MSWSGLLHGLNTSLTCGPALVPRLWATCSMATLNQMHRLGPPKRPPRKLGPTEGRPQLKGVVLCTFTRKP KKPNSANRKCCRVRLSTGREAVCFIPGEGHTLQEHQIVLVEGGRTQDLPGVKLTVVRGKYDCGHVQKK TRTRPLE - GFP Tag - V
Restriction Sites:	SgfI-MluI

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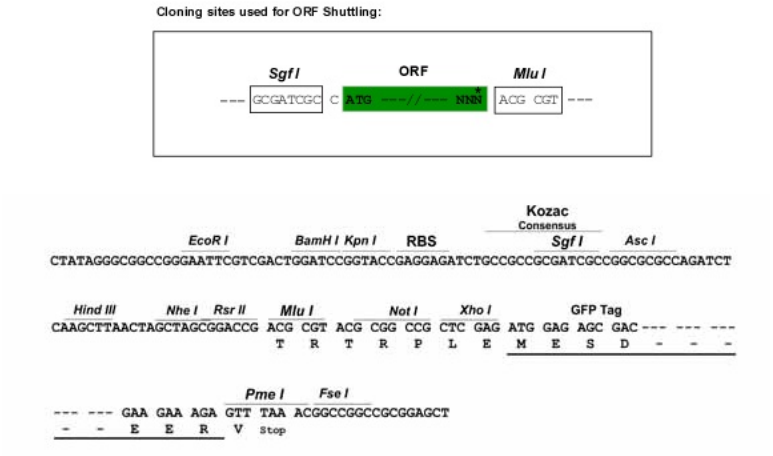
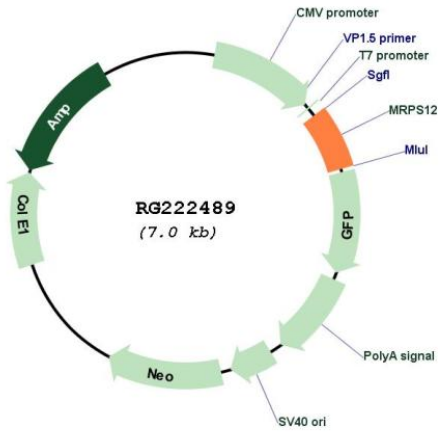
Cloning Scheme:



Plasmid Map:



ACCN: NM_021107

ORF Size: 414 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_021107.1, NP_066930.1
RefSeq Size:	1094 bp
RefSeq ORF:	417 bp
Locus ID:	6183
UniProt ID:	O15235
Cytogenetics:	19q13.2
Domains:	Ribosomal_S12
Protein Families:	Druggable Genome, Stem cell - Pluripotency
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 28S subunit protein that belongs to the ribosomal protein S12P family. The encoded protein is a key component of the ribosomal small subunit and controls the decoding fidelity and susceptibility to aminoglycoside antibiotics. The gene for mitochondrial seryl-tRNA synthetase is located upstream and adjacent to this gene, and both genes are possible candidates for the autosomal dominant deafness gene (DFNA4). Splice variants that differ in the 5' UTR have been found for this gene; all three variants encode the same protein. [provided by RefSeq, Jul 2008]