

Product datasheet for **SC112966**

MRPS12 (NM_021107) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	MRPS12 (NM_021107) Human Untagged Clone
Tag:	Tag Free
Symbol:	MRPS12
Synonyms:	MPR-S12; MT-RPS12; RPMS12; RPS12; RPSM12
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC112966 sequence for NM_021107 edited (data generated by NextGen Sequencing)

```
ATGTCCTGGTCTGGCCTTCTCCATGGCCTCAACACGTCCCTAACTTGTGGCCAGCTCTG
GTTCCCCGGCTCTGGGCTACCTGCTCCATGGCTACCCTGAACCAGATGCACCGCCTGGGG
CCCCCAAGCGGCCGCTCGGAAGCTGGGCCCCACGGAAGGCCGCGCAGCTGAAGGGT
GTGGTCTGTGCACGTTTACCCGCAAGCCGAAGAAGCCAACTCAGCAAATCGCAAGTGC
TGTCGAGTGCGGCTCAGCACTGGCCGCGAGGCCGTCTGCTTCATCCCTGGGGAGGGCCAC
ACCCTGCAGGAGCACCAGATTGCTTGTGGAGGGCGGCCGACCCAGGACCTGCCAGGC
GTCAAGCTCACCGTTGTGCGTGGCAAGTACGACTGTGGCCACGTGCAGAAGAAGTGA
```

Clone variation with respect to NM_021107.1



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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_021107 unedited
AAAAAGTCGGAATTTGTATACGACTCATATAGGCGGCCGNAATTCGCACGAGGAGCGT
GTCCGCGACCTCACCTTTAGGTCCTGTGAGGTCGGTGGAAATCCTGGGGTCCTCCAATCT
ACCAGGCCATCTCCCAGTTTCCCAGTTCTTCTGCGTGCGGGCGAGAGTGGTTGGGCC
TCGGGAACCCACTCAGAGCGAGGCTAAATTTACGGAGGGACTTTCTGTTAGCAGCATGAG
GGCTGTGGTTAGACCTATAGAGGTATTTCTTTGATTTAAGCCAGAAAGTCTGAGAGC
GGATCGGGGAGCATTTGCGGATCGGTCACTTTTTCTCCTTTCTGAGTCTCTTATCCCCT
ACCACAGGGACGGCCAGGTGGCAGGATGCTCTGGTCTGGCCTTCTCCATGGCCTCAACA
CGTCCCTAACTTGTGGCCAGCTCTGGTTCCCGGCTCTGGGCTACCTGTCCATGGCTA
CCCTGAACCAGATGCACCGCTGGGGCCCCCAAGCGGCCGCTCGGAAGCTGGGCCCA
CGGAAGGCCGGCCGACGTGAAGGGTGTGGTCTGTGCACGTTTACCCGCAAGCCGAAGA
AGCCCAACTCAGCCAATCGCAAGTGTGTGAGTGTGGTCTGAGTGTGGTCTGAGTGTGGT
TCTGCTTATCCCTGGGAGGGCCACACCCTGCAGGAGCACCAGATTGTCCTTGTNGAG
GGCGGCCGACCCAGGACCTGCCAGGCGTCAAGCTCACCGTTGTGCGTGGCAAGTACGAC
TGTGGCCACGTGCAAAAATATGACGGCTGGGGCCCATGGGGCTGGGGCCCTGCAGA
ACATGAACCTTTCGCTCTGGTGCACAG

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_021107 unedited
CGGCACGCAATCTAGAGTCGAGTTTTTTTTTTTTTTTTTTTACATCACAAGCGCCAGGGTC
TGTTTTATAAAACCCCTCCCAGCAGAGGGCAGTACAGTGTCTTGTCCCAGCAGAAAAGG
TCCTTCAGGCCACCCCTCTAAACACAGGAGCCAAGGGTGTGACAGAGGGGCACCCTTTG
CACCCCAAGGACTCCTATGGCTTAATAGTGGTCTGATGGAAGAGCGGAGCCAGGACTT
GAATCCATGAGTGGCTGCCTCTAGAGGCGCAAAGGCCAGCATCGGAGGACCCTGTGGCAG
CCAGGAGCGGAAGTTCATGTTCTGCAGGGCGCCAGCCACTGTGCCCCAGCCGTC
TTCTTCTGCACGTGGCCACAGTCTACTTGCACGCACAACGGTGTGAGCTTGACGCTGG
CAGGTCCTGGGTGCGGCCGCCCTCCACAAGGACAATCTGGTGTCTGTCAGGGTGTGGCC
CTCCCCAGGGATGAAGCAGACGGCTCGCGGCCAGTGTGAGCCGCACTCGACAGCACTT
GCGATTGGCTGAGTTGGGCTTCTCGGCTTGGGGTAAACGTGCACAGGACCACACCCTT
CAGCTGCGGCCCGCCCTTCCGTGGGGCCAGCTTCCGAGGCGGCCGCTTGGGGGGCCCCAG
GGGTGACATCTGGTTCAGGGTAGCCCTGGAGCATGTAGCCCCAGAGCCGGGACCAAGAGT
GGGCCACAGTTANGGACGTGTTGAGCCATGGAGATGCCAATACCAGACATCCCTGCACCT
GGCCGTCNCTGTGGTAGGGGATANNAGACTCANAAAGGAGGAAAAGTGACCGATCCGCA
AAGCTCCCGATCCGCTTTCAGACTTTCTGTCTAAAATCAAGGAATTACTTTATAGTC
TACCCACAGCCCTAAGCTGCTACAGAAAGTCCTCCGTAAATTAACCCCTCTGAAGGGTC
CCCAGGCCN

Restriction Sites:

NotI-NotI

ACCN:

NM_021107

Insert Size:

1150 bp

OTI Disclaimer:

Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).

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]

Transcript Variant: This variant (1) is the longest transcript, when the polyA tail is excluded. Variants 1, 2, and 3 encode the same isoform.