

## Product datasheet for **MR217444**

### Grpel2 (NM\_021296) Mouse Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Grpel2 (NM\_021296) Mouse Tagged ORF Clone  
**Tag:** Myc-DDK  
**Symbol:** Grpel2  
**Synonyms:** mt-GrpE#2; mt-Grpel2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-Entry (PS100001)  
**E. coli Selection:** Kanamycin (25 ug/mL)  
**ORF Nucleotide Sequence:** >MR217444 representing NM\_021296  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGCGGCGGTTTCGCTGTGGGCGGTGCAGCGGCTGCAGCGCCTCCTGGCCTCGGGGGCTATGTCAGAGA  
GCAGGGGATGGCTCCACCCATTCAGCACTGCCACCCAAAGAACTGCTGGGAAGACTGCAGTTCGAGGA  
CCCTCCTGATGGACTGGGACCCCTCCTTGCTGAGCAGGCCTTAAGGCTCAAAGCTGTTAACTGGAAAAG  
GAAGTCCAGGATTAACCCTGAGATACCAGAGAGCTGTCGCTGATTGTGAAAACATAAGGAGAAGAACC  
AGAGATGTGTGGAAGACGGAAGATATTTGGGATCCAGAGCTTCTGCAAGGACCTGGTGGAGGTGGCAGA  
CATTTTGGAGAAGACTGCCAAGTCTGTTGAGAAGGGGCAGAACCTGAGGACCACAGGCGCACTCTGGAA  
AAAGTCTTCCAAGGGCTGTCCCTGCTAGAAGCCAGACTGAAAAGCGTATTTACCAAGCATGGCCTAGAGA  
AAATGACACCCATCGGTGACAAATACGACCCTCACGAGCATGAACTCATCTGTACATGCCAGCAGGTGT  
TGGGGTACAGCCTGGCACCGTGGCATTAGTTCGGCAAGATGGCTACAAACTTCATGGCCGCACCATTAGA  
CTTGCGCAAGTGAAGTGGCAGTAGAGTCTCAGAGAAGACTC

**ACGCGT**ACGCGGCGGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT  
ACAAGGATGACGACGATAAGGTTTAA



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**Protein Sequence:** >MR217444 representing NM\_021296  
Red=Cloning site Green=Tags(s)

MAARSLWAVQRLQRLASGAMSESRGWLHPFSTATQRTAGEDCSSDPPDGLGPSLAEQALRLKAVKLEK  
 EVQDLTLRYQRAVADCENIRRRTRQRCVEDAKIFGIQSFCKDLVEVADILEKTAKCCSEGAEPEDHRRRTLE  
 KVFQGLSLL EARLKS VFKHGLEK MTPIGDKYDPHEHELICHMPAGVGVQPGTVALVRQDGYKLHGRTIR  
 LAQVEVAVESQRRRL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** [https://cdn.origene.com/chromatograms/mm9058\\_a11.zip](https://cdn.origene.com/chromatograms/mm9058_a11.zip)

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_021296

**ORF Size:** 672 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\\_021296.2](#), [NP\\_067271.1](#)

**RefSeq Size:** 4065 bp

**RefSeq ORF:** 675 bp

**Locus ID:** 17714

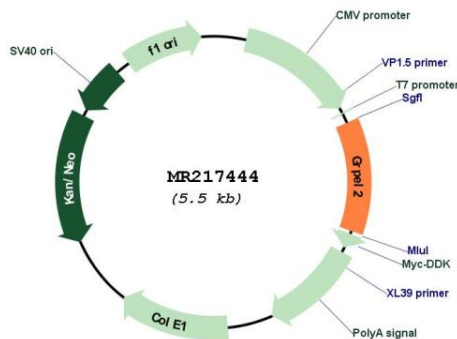
**UniProt ID:** [O88396](#)

**Cytogenetics:** 18 E1

**MW:** 25 kDa

**Gene Summary:** Essential component of the PAM complex, a complex required for the translocation of transit peptide-containing proteins from the inner membrane into the mitochondrial matrix in an ATP-dependent manner. Seems to control the nucleotide-dependent binding of mitochondrial HSP70 to substrate proteins. Stimulates ATPase activity of mt-HSP70. May also serve to modulate the interconversion of oligomeric (inactive) and monomeric (active) forms of mt-HSP70.[UniProtKB/Swiss-Prot Function]

### Product images:



Circular map for MR217444