

Product datasheet for **RC206315**

GRPEL2 (NM_152407) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	GRPEL2 (NM_152407) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	GRPEL2
Synonyms:	Mt-GrpE#2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC206315 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCCGTACGGTCGCTGTGGCGGGCCGGCTGCGGGTGCAGCGCCTACTGGCCTGGAGTGCAGCGTGGG
AGAGCAAGGGATGGCCGCTTCCATTAGCACTGCCACCCAGAGAAGTCTGGTGAGGACTGCCGTTCTGA
GGACCTCCTGATGAGCTTGGGCCCTTCTGCTGAACGAGCCTAAGGGTAAAAGCTGTTAACTGGAG
AAAGAAGTCCAAGATTTAACAGTGAGATACCAGAGAGCTATAGCTGATTGTGAAAACATAAGGAGGCGAA
CCCAGAGATGTGTGGAAGACGCCAAGATATTTGGAATCCAGAGTTCTGTAAAGACTTGGTGGAGGTGGC
TGACATTTTGGAGAAGACTACAGAGTGCATTTCTGAAGAATCGGAGCCTGAGGACCAAAAGCTCACTCTG
GAGAAGGTCTTCCGAGGGTTGTTGCTTTTGAAGCAAAGCTGAAAAGTGTGTTTGCCAAGCATGGCCTGG
AGAAACTGACACCCATTGGTGACAAATATGACCCCATGAGCATGAACTCATCTGTATGTGCCAGCTGG
TGTTGGGGTGCAGCCTGGCACCCTGGCATTAGTAAGACAAGATGGGTACAAACTTCATGGCCGACCATT
AGGCTTGCCCGAGTGGAAGTGCCAGTGGAGTCTCAGAGAAGACTG

ACGCGTACGCGGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC206315 protein sequence
 Red=Cloning site Green=Tags(s)

MAVRSLWAGRLRVQRLLEAWSAAWESKGWPLPFSTATQRTAGEDCRSEDPPDELGPPLAERALRVKAVKLE
 KEVQDLTVRYQRAIADCENIRRRRTQRCVEDAKIFGIQSFCKDLVEVADILEKTTECISEESEPEDQKLT
 EKVFRGLLLLEAKLKSVFAKHGLEKLTPIGDKYDPHEHELICHVPAGVGVQPGTVALVRQDGYKLGRTI
 RLARVEVAVESQRRL

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6770_b05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:

Cloning sites used for ORF Shuttling:



* The last codon before the Stop codon of the ORF

ACCN: NM_152407

ORF Size: 675 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_152407.4](#)

RefSeq Size: 4105 bp

RefSeq ORF: 678 bp

Locus ID: 134266

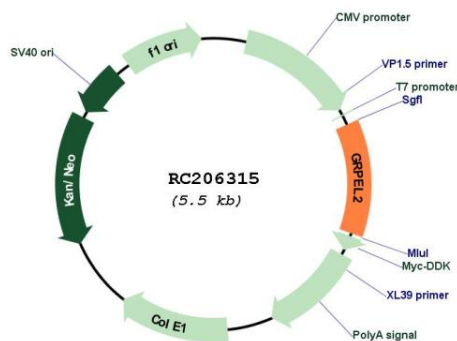
UniProt ID: [Q8TAA5](#)

Cytogenetics: 5q32

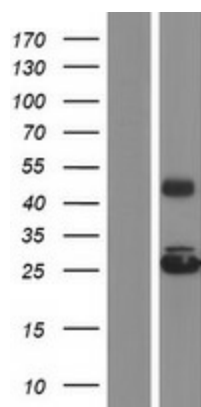
MW: 25.4 kDa

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 (By similarity).[UniProtKB/Swiss-Prot Function]

Product images:



Circular map for RC206315



Western blot validation of overexpression lysate (Cat# [LY407575]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC206315 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).