

Product datasheet for **RC210792**

PKR (EIF2AK2) (NM_002759) Human Tagged ORF Clone

Product data:

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| Product Type: | Expression Plasmids |
| Product Name: | PKR (EIF2AK2) (NM_002759) Human Tagged ORF Clone |
| Tag: | Myc-DDK |
| Symbol: | PKR |
| Synonyms: | EIF2AK1; LEUDEN; PKR; PPP1R83; PRKR |
| Mammalian Cell Selection: | Neomycin |
| Vector: | pCMV6-Entry (PS100001) |
| E. coli Selection: | Kanamycin (25 ug/mL) |



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ORF Nucleotide Sequence:

>RC210792 ORF sequence
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGCATCGCC**

ATGGCTGGTGATCTTTCAGCAGGTTTCTCATGGAGAACTTAATACATACCGTCAGAAGCAGGGAGTAG
 TACTTAAATATCAAGAACTGCCTAATTCAGGACCTCCACATGATAGGAGGTTTACATTTCAAGTTATAAT
 AGATGGAAGAGAATTTCCAGAAGGTGAAGGTAGATCAAAGAAGGAAGCAAAAAATGCCGACGCAAAATTA
 GCTGTTGAGATACTTAATAAGGAAAAGAAGGCAGTTAGTCCTTTATTATTGACAACAACGAATTTCTCAG
 AAGGATTATCCATGGGAATTACATAGGCCTTATCAATAGAATTGCCAGAAGAAAAGACTAACTGTAAA
 TTATGAACAGTGTGCATCGGGGTGCATGGCCAGAAGGATTTTCATTATAAATGCAAAATGGGACAGAAA
 GAATATAGTATTGGTACAGGTTCTACTAAACAGGAAGCAAAACAATTGGCCGCTAAACTGCATATCTTC
 AGATATTATCAGAAGAACTCAGTGAAATCTGACTACCTGTCTCTGGTCTTTTGGTACTACGTGTGA
 GTCCCAAAGCAACTCTTGTAGTGACCAGCACACTCGCTTCTGAATCATCATCTGAAGGTGACTTCTCAGCA
 GATACATCAGAGATAAATTTCAACAGTGACAGTTTAAACAGTTCTTCGTTGCTTATGAATGGTCTCAGAA
 ATAATCAAAGGAAGGCAAAAAGATCTTTGGCACCCAGATTTGACCTTCCTGACATGAAAAGAAACAAAGTA
 TACTGTGGACAAGAGGTTTGGCATGGATTTTAAAGAAATAGAATTAATTGGCTCAGGTGGATTTGGCCAA
 GTTTTCAAAGCAAAACACAGAATTGACGGAAAGACTTACGTTATTAACGTGTTAAATATAATAACGAGA
 AGGCGGAGCGTGAAGTAAAAGCATTGGCAAACTTGATCATGTAATATTGTTCACTACAATGGCTGTTG
 GGATGGATTTGATTATGATCCTGAGACCACTGATGATTCTTTGAGAGCAGTGATTATGATCCTGAGAAC
 AGCAAAAATAGTTCAGGTCAAAGACTAAGTGCCTTTTCATCAAATGGAATCTGTGATAAAGGGACCT
 TGGAACAATGGATTGAAAAAGAAGAGCGGAGAAACTAGACAAAGTTTTGGCTTTGGAACCTTTTGAAACA
 AATAACAAAAGGGTGGATTATATACATTCAAAAAATAATTCATAGAGATCTTAAGCCAAGTAATATA
 TTCTTAGTAGATACAAAACAAGTAAAGATTGGAGACTTTGGACTTGAACATCTCTGAAAAATGATGGAA
 AGCGAACAAGGAGTAAGGGAACCTTTCGATACATGAGCCAGAACAGATTTCTTCGCAAGACTATGGAAA
 GGAAGTGGACCTTACGCTTTGGGGCTAATTTCTGCTGAACCTTCTCATGTATGTGACACTGCTTTTGAA
 ACATCAAAGTTTTTACAGACCTACGGGATGGCATCATCTCAGATATATTTGATAAAAAAGAAAAAATCT
 TTCTACAGAAATTAATCTCAAAGAACTGAGGATCGACCTAACACATCTGAAATACTAAGGACCTTGAC
 TGTGTGGAAGAAAAGCCAGAGAAAAATGAACGACACACATGT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence:

>RC210792 protein sequence
 Red=Cloning site Green=Tags(s)

MAGDLSAGFFMEELNTYRQKQGVVLKYQELPNSGPPHRRFTFQVIIDGREFPEGEGRSKKEAKNAAKL
 AVEILNKEKAVSPLLLTTTNSSEGLSMGNYIGLINRIAQKRLTVNYEQCASVHGPEGFHYKCKMGQK
 EYSIGTGSTKQEAQLAAKLAYLQILSEETSVKSDYLSGSFATTCEQSNSLVTSTLASESSSEGDFSA
 DTSEINSDSLNSSLMLNGLRNNQRKAKRSLAPRFDLPDMKETKYTVDKRFGMDFKEIELIGSGFGQ
 VFKAKHRIDGKTYVIKRVKYNNEKAEREVKALAKLDHVNIVHYNGCWDGFDYDPETSDDSLSSDYDPEN
 SKNSSRSKTKCLFIQMEFCDKGTLEQWIEKRRGEKLDKVLALLEFEQITKGVVDYIHSKLIHRDLKPSNI
 FLVDTKQVKIGDFGLVTSKNDGKRTRSKGTLRYMSPEQISSQDYGKEVDLYALGLILAELLHVCDTAFE
 TSKFFDRLDGIISDIFDKKEKTLQLLSKKPEDRPNTSEILRTLTVWKKSPKNERHTC

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms:

https://cdn.origene.com/chromatograms/mk6195_a05.zip

Restriction Sites:

Sgfl-MluI

Cloning Scheme:



ACCN: NM_002759

ORF Size: 1653 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

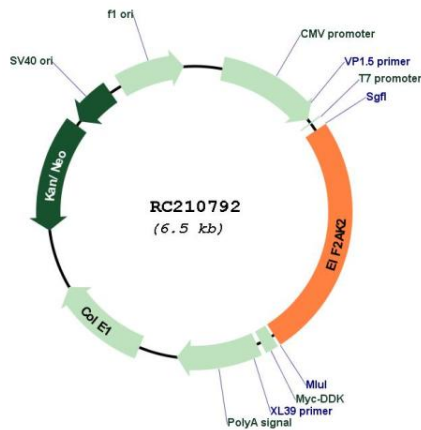
OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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).

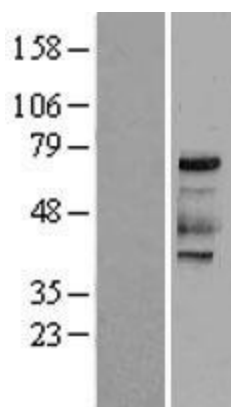
- Reconstitution Method:
1. Centrifuge at 5,000xg for 5min.
 2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.
 3. Close the tube and incubate for 10 minutes at room temperature.
 4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid 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.

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| Note: | Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required. |
| RefSeq: | <u>NM_002759.3</u> |
| RefSeq Size: | 4361 bp |
| RefSeq ORF: | 1656 bp |
| Locus ID: | 5610 |
| UniProt ID: | <u>P19525</u> |
| Cytogenetics: | 2p22.2 |
| Domains: | ppkinase, DSRM, TyrKc, S_TKc |
| Protein Families: | Druggable Genome, Protein Kinase, Transcription Factors |
| MW: | 62.1 kDa |
| Gene Summary: | The protein encoded by this gene is a serine/threonine protein kinase that is activated by autophosphorylation after binding to dsRNA. The activated form of the encoded protein can phosphorylate translation initiation factor EIF2S1, which in turn inhibits protein synthesis. This protein is also activated by manganese ions and heparin. Three transcript variants encoding two different isoforms have been found for this gene. [provided by RefSeq, Oct 2011] |

Product images:



Circular map for RC210792



Western blot validation of overexpression lysate (Cat# [LY427650]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with [RC226606] using transfection reagent MegaTran 2.0 (Cat# [TT210002]).