

## Product datasheet for **RC226702**

### PKR (EIF2AK2) (NM\_001135652) Human Tagged ORF Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PKR (EIF2AK2) (NM_001135652) 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:**

>RC226702 representing NM\_001135652  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGCTGGTGATCTTTCAGCAGGTTTCTTCATGGAGGAACCTAATACATACCGTCAGAAGCAGGGAGTAG  
 TACTTAAATATCAAGAAGCTGCCTAATTCAGGACCTCCACATGATAGGAGGTTTACATTTCAAGTTATAAT  
 AGATGGAAGAGAATTTCCAGAAGGTGAAGGTAGATCAAAGAAGGAAGCAAAAAATGCCGAGCAAAATTA  
 GCTGTTGAGATACTTAATAAGGAAAAGAAGGCAGTTAGTCCTTTATTATTGACAACAACGAATCTTCAG  
 AAGGATTATCCATGGGAATTACATAGGCCTTATCAATAGAATTGCCAGAAGAAAAGACTAACTGTAAA  
 TTATGAACAGTGTGCATCGGGGTGCATGGCCAGAAGGATTTTCATTATAAATGCAAAATGGGACAGAAA  
 GAATATAGTATTGGTACAGGTTCTACTAAACAGGAAGCAAAACAATTGGCCGCTAAACTGCATATCTTC  
 AGATATTATCAGAAGAACTCAGTGAAATCTGACTACCTGTCTCTGGTCTTTTGGTACTACGTGTGA  
 GTCCCAAAGCAACTCTTGTAGTGACCAGCACACTCGCTTCTGAATCATCATCTGAAGTGACTTCTCAGCA  
 GATACATCAGAGATAAATTTAACAAGTGACAGTTTAAACAGTTCTTCGTTGCTTATGAATGGTCTCAGAA  
 ATAATCAAAGGAAGGCAAAAAGATCTTTGGCACCCAGATTTGACCTTCTGACATGAAAAGAAACAAAGTA  
 TACTGTGGACAAGAGGAAGGCGGAGCGTGAAGTAAAAGCATTGGCAAACTTGATCATGTAATATTGTT  
 CACTACAATGGCTGTTGGGATGGATTTGATTATGATCCTGAGACCAGTGATGATTCTCTTGAGAGCAGTG  
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 CTGTGATAAAGGGACCTTGAACAATGGATTGAAAAAGAAGAGGCGAGAACTAGACAAAGTTTGGCT  
 TTGGAACCTTTGAACAAATAACAAAAGGGTGGATTATATACATTCAAAAAATTAATTCATAGAGATC  
 TTAAGCCAAGTAATATATCTTAGTAGATACAAAACAAGTAAAGATTGGAGACTTTGGACTTGTAAACATC  
 TCTGAAAAATGATGGAAGCGAACAAGGAGTAAGGGAACTTTGGGATACATGAGCCAGAACAGATTTCT  
 TCGCAAGACTATGGAAGGAAGTGGACCTCTACGCTTTGGGGCTAATTCTTGCTGAACCTTCTCATGTAT  
 GTGACACTGCTTTTGAACATCAAAGTTTTTACAGACCTACGGGATGGCATCATCTCAGATATATTTGA  
 TAAAAAGAAAAACTCTTCTACAGAAATACTCTCAAAGAACTGAGGATCGACCTAACACATCTGAA  
 ATACTAAGGACCTTGACTGTGTGGAAGAAAAGCCAGAGAAAAATGAACGACACACATGT

**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCTGGATT  
 ACAAGGATGACGACGATAAGGTTTAA

**Protein Sequence:**

>RC226702 representing NM\_001135652  
 Red=Cloning site Green=Tags(s)

MAGDLSAGFFMEELNTYRQKQGVVLYQELPNSGPPHRRFTFQVIIDGREFPEGEGRSKKEAKNAAKL  
 AVEILNKEKKAVSPLLLTTNSSEGLSMGNYIGLINRIAQKKRLTVNYEQCASGVHGPEGFHYKCKMGQK  
 EYSIGTGSTKQEAQKLAAKLAYLQILSEETSVKSDYLSGSFATTCESSQNSLVTSLASESSSEGDFSA  
 DTSEINSNSDSLSSLLMNGLRNNQRKAKRSLAPRFDLPDMKETYTVDKRKAEREVKALAKLDHVNIV  
 HYNGCWDGFDYDPETSDDSLESSDYDPENSKNSSRSKTKCLFIQMEFCDKGTLEQWIEKRRGEKLDKVL  
 LELFEQITKGVDIHKKLIHRDLKPSNIFLVDTKQVKIGDFGLVTSKNDGKRTRSKGTLRYMSPEQIS  
 SQDYGKEVDLYALGLILAEHLHVCDAFETSKFFDLDLTDGIISDIFDKKEKLLQKLLSKKPEDRPNTSE  
 ILRTLTVWKKSPKNERHTC

**TRTRPLEQKLI**SEEDLAANDILDYKDDDDKV

**Chromatograms:**

[https://cdn.origene.com/chromatograms/mk8064\\_d02.zip](https://cdn.origene.com/chromatograms/mk8064_d02.zip)

**Restriction Sites:**

Sgfl-Mlul

**Cloning Scheme:**


**ACCN:** NM\_001135652

**ORF Size:** 1530 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\\_001135652.2](#), [NP\\_001129124.1](#)

**RefSeq ORF:** 1533 bp

**Locus ID:** 5610

**UniProt ID:** [P19525](#)

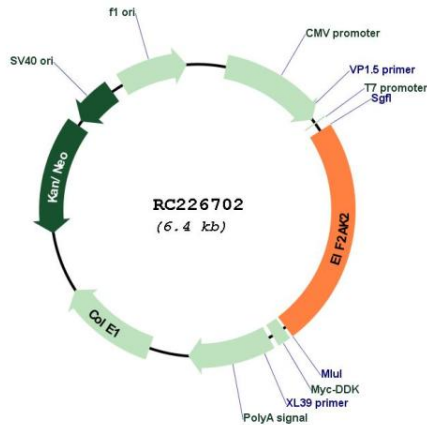
**Cytogenetics:** 2p22.2

**Protein Families:** Druggable Genome, Protein Kinase, Transcription Factors

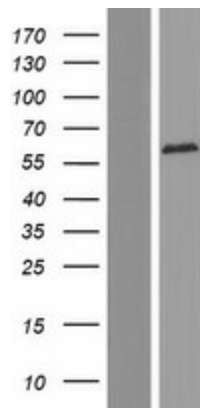
**MW:** 57.2 kDa

**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 RC226702



Western blot validation of overexpression lysate (Cat# [LY427651]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC226702 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).