

## Product datasheet for **SC118433**

### PKR (EIF2AK2) (NM\_002759) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	PKR (EIF2AK2) (NM_002759) Human Untagged Clone
Tag:	Tag Free
Symbol:	PKR
Synonyms:	EIF2AK1; LEUDEN; PKR; PPP1R83; PRKR
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >OriGene ORF sequence for NM\_002759 edited  
 ATGGCTGGTGATCTTTCAGCAGGTTTCTTCATGGAGGAACTTAATACATACCGTCAGAAG  
 CAGGGAGTAGTACTTAAATATCAAGAACTGCCTAATTCAGGACCTCCACATGATAGGAGG  
 TTTACATTTCAAGTTATAATAGATGGAAGAGAATTTCCAGAAGGTGAAGGTAGATCAAAG  
 AAGGAAGCAAAAAATGCCGCAGCCAAATTAGCTGTTGAGATACTTAATAAGGAAAAGAAG  
 GCAGTTAGTCCTTATTATTGACAACAACGAATTCTTCAGAAGGATTATCCATGGGGAAT  
 TACATAGGCCTTATCAATAGAATTGCCCAAGAAAAGACTAAGTAAATTTATGAACAG  
 TGTGCATCGGGGTGCATGGGCCAGAAGATTTTATTATAAATGCAAAAATGGGACAGAAA  
 GAATATAGTATTGGTACAGGTTCTACTAAACAGGAAGCAAAAATTGGCCGCTAAACTT  
 GCATATCTTCAGATATTATCAGAAGAACTCAGTGAAATCTGACTACCTGTCCTCTGGT  
 TCTTTTGGTACTACGTGTGAGTCCCAAAGCAACTCTTTAGTGACCAGCACACTCGTTCT  
 GAATCATCATCTGAAGGTGACTTCTCAGCAGATACATCAGAGATAAATTCTAACAGTGAC  
 AGTTTAAACAGTCTTCGTTGCTTATGAATGGTCTCAGAAATAATCAAAGGAAGGCAAAA  
 AGATCTTTGGCACCCAGATTTGACCTTCCTGACATGAAAGAAAACAAAGTAACTGTGGAC  
 AAGAGGTTTGGCATGGATTTTAAAGAAATAGAATTAATTGGCTCAGGTGGATTTGGCCAA  
 GTTTTCAAAGCAAAACACAGAATTGACGGAAGACTTACGTTATTAAACGTGTTAAATAT  
 AATAACGAGAAGGCGGAGCGTGAAGTAAAAGCATTGGCAAAACTTGATCATGTAAATATT  
 GTTCACTACAATGGCTGTTGGGATGGATTTGATTATGATCCTGAGACCAGTGATGATTCT  
 CTTGAGAGCAGTGATTATGATCCTGAGAACAGCAAAAATAGTTCAAGGTCAAAGACTAAG  
 TGCCTTTTCATCCAAATGGAATTCTGTGATAAAGGGACCTTGAACAATGGATTGAAAAA  
 AGAAGAGGCGAGAACTAGACAAAGTTTTGGCTTTGGAACCTTTGAACAATAACAAAA  
 GGGGTGGATTATACATTTCAAAAAAATTAATTCATAGAGATCTTAAGCCAAGTAATATA  
 TTCTTAGTAGATACAAAACAAGTAAAGATTGGAGACTTTGGACTTGTAAACATCTGTGAAA  
 AATGATGGAAAGCGAACAAAGGAGTAAGGAACTTTGCGATACATGAGCCAGAACAGATT  
 TCTTCGCAAGACTATGGAAGGAAGTGGACCTCTACGCTTTGGGCTAATTCTTGCTGAA  
 CTTCTTATGATGTGACACTGCTTTTGAACATCAAAGTTTTTTCACAGACCTACGGGAT  
 GGCATCATCTCAGATATATTTGATAAAAAAGAAAAAATCTTCTACAGAAATTAATCTCA  
 AAGAACTGAGGATCGACCTAACACATCTGAAATACTAAGGACCTTGACTGTGTGGAAG  
 AAAAGCCAGAGAAAAATGAACGACACACATGTTAG

**5' Read Nucleotide Sequence:** >OriGene 5' read for NM\_002759 unedited  
 AGACCGGATTTGTAACCGACTTATATAGGCGGCCGCGCAATTCGCACGAGGGCCGGCGG  
 CGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGGCGG  
 TGTAATTTGTAATGACCTCAAACTTTAGCAGTCTTCCATCTGACTCAGGTTTGCCTTCT  
 CTGGCGGTCTTTCAGAATCAACATCCACACTTCCGTGATTATCTGCGTGCATTTTGGACAA  
 AGCTTCCAACCAGGATACGGGAAGAAGAAATGGCTGGTGTATCTTTCAGCAGGTTTCTTCA  
 TGGAGGAACTTAATACATACCGTCAAGAGCAGGGAGTAGTACTTAATATCAAGAACTGC  
 CTAATTCAGGACCTCCACATGATAGGAGTTTACATTTCAAGTTATAATAGATGGAAGAG  
 AATTTCCAGAAGGTGAAGGTAGATCAAAGAAGGAAGCAAAAAATGCCGCAGCCAAATTAG  
 CTGTTGAGATACTTAATAAGGAAAAGAGGAGTGTAGTCTTTATTATTGACAACAACGA  
 ATTCTTCAGAAGGATTATCCATGGGGAATTACATAGGCTTATCAATAGAATTGCCCAGA  
 AGAAAAGACTAACTGTAATTTGAAACAGTGTGCATCGGGGTGCATGGCCAGAAAGAT  
 TTCATTATAAATGCAAAATGGGACAGAAAGAATATAGTATTGGTACAGGTTCTACTAAAC  
 AGGAAGCAAAACATTGGCCGCTAACTTGACATATCTTCAGATATTATCAGAAGAACTC  
 AGTGAAATCTGACTACCTGTCCTCTGGTCTTTTGGTACTACGTGTGAGTCCCANNAGCA  
 CTCTTAGTGACCAGCACACTCGCTTCTGAATCATCATCTGAAGGTGACTTCTCAGCAGAT  
 ACATCAGAGATAAATTCTAACAGTGACAGTTAA

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_002759 unedited  
 CTCTCTGNNACCGCGGCCGAATCTANAGTCGAGTTTTTTTTTTTTTTTTTAATGAGTAC  
 CCATATTTCTCCAGCTGGCTTGTAAAGCTATGTGAGGCAGAGAACGATCTTACATTTTTT  
 GGCCTAAAAGCGGTAGAAATTTAATAAATAGATATGAATTGATTGATTACATTAATAGTAT  
 AAAAAGAAAATTTGGGGTGGTTTTCCATCTTTAGAACAAGAGATGAGGCTGGGCGCG  
 GTGGCTCATCCCTGTAATCCCAGCACTTGGGAGGCCGAGGCAGGTGGATTACTTGAGGT  
 CAGGAGTTTGAGACCAGCTGGCCAACATGGTGAACCCCTGTCTTTATTA AAAACACAAA  
 AATTAGTTGGGTGGGTGGCACATGCCTGTAAATCCAGCTACTCAGGAGGCTGAGGCAGGAG  
 AATCACTTGAACCAAGAGGCAGAAAGTTGCAGTGAGCCAAGACTGTGTCATTGCACTCCA  
 GCCTGNGCAACAGAGCGAGACTCTGTCTTTAAAAAAAAAAAAAAAAAGAATAAAGAGATGAGC  
 CAGGAAAAAGTAAAATGTAAGAATGTTTTGAAGCAAAAAGAAGAAAACCTTTCTGTTTC  
 TGCAGAAAGATTAGTAAAAATAGTAAAAAATTAAGGAAACATTAATAAAAAGTAAAT  
 ATCTATTGATATCCCTAGCAGATTTTAGATAATTTAAGGAACTGCATATCANAAGCAG  
 GATACTTTTTCAGAAGGGCTCCTACATGTGTGTCGTTCATTTTCTCTGGGCTTTCTTCC  
 CACAGTNCAGGTCTTATTATTAGATGTGTTAGGTCGATCCCTAAGTTTTCTTGAAAGT  
 ATTTTCTGAAGAGAATTTTTCTTTTTATCAAATTTTTTGAAATGATCCATTCCCGTAG  
 TCTGTGAAAAACTTGATGTTTCAAACAGTGGCCCTACTGGAGAATTCCACCAGAATTTCC  
 CCAAGCGA

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_002759

**Insert Size:**

2580 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](mailto: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:**

The ORF of this clone is found to be a perfect match to NM\_002759.1.

**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:	<a href="#">NM_002759.1</a> , <a href="#">NP_002750.1</a>
RefSeq Size:	2808 bp
RefSeq ORF:	1656 bp
Locus ID:	5610
UniProt ID:	<a href="#">P19525</a>
Cytogenetics:	2p22.2
Domains:	pkinase, DSRM, TyrKc, S_TKc
Protein Families:	Druggable Genome, Protein Kinase, Transcription Factors
Gene Summary:	<p>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]</p> <p>Transcript Variant: This variant (1) represents the longest transcript. Variants 1 and 2 both encode the same protein (isoform a). Sequence Note: This RefSeq record was created from transcript and genomic sequence data to make the sequence consistent with the reference genome assembly. The genomic coordinates used for the transcript record were based on transcript alignments.</p>