

## Product datasheet for **SC323431**

### 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)



[View online »](#)

**Fully Sequenced ORF:** >OriGene ORF within SC323431 sequence for NM\_002759 edited (data generated by NextGen Sequencing)

```

ATGGCTGGTGATCTTTCAGCAGGTTTCTTCATGGAGGAACCTAATACATACCGTCAGAAG
CAGGGAGTAGTACTTAAATATCAAGAACTGCCTAATTCAGGACCTCCACATGATAGGAGG
TTTACATTTCAAGTTATAATAGATGGAAGAGAATTTCCAGAAGGTGAAGGTAGATCAAAG
AAGGAAGCAAAAAATGCCGCAGCCAAATAGCTGTTGAGATACTTAATAAGGAAAAGAAG
GCAGTTAGTCCTTTATTATTGACAACAACGAATTTCCAGAAGGATTATCCATGGGGAAT
TACATAGGCCTTATCAATAGAATTGCCCAAGAAAAGACTAACTGTAAATTTATGAACAG
TGTGCATCGGGGGTGCATGGGCCAGAAGGATTTTATTATAAAATGCAAAATGGGACAGAAA
GAATATAGTATTGGTACAGGTTCTACTAAACAGGAAGCAAAACAATTGGCCGCTAAAATT
GCATATCTTCAGATATTATCAGAAGAACTCAGTGAAATCTGACTACCTGCTCTGGT
TCTTTTGTACTACTGCTGAGTCCCAAAGCAACTCTTTAGTGACCAGCACACTCGTTCT
GAATCATCATCTGAAGGTGACTTCTCAGCAGATACATCAGAGATAAATTCTAACAGTGAC
AGTTTAAACAGTCTTTCGTTGCTTATGAATGGTCTCAGAAATAATCAAAGGAAGGCAAAA
AGATCTTTGGCACCCAGATTTGACCTTCCTGACATGAAAGAAAACAAAGTAACTGTGGAC
AAGAGGTTTGGCATGGATTTTAAAGAAATAGAATTAATTGGCTCAGGTGGATTTGGCCAA
GTTTTCAAAGCAAAACACAGAATTGACGAAAAGACTTACGTTATTATGCGTGTTAAATAT
AATAACGAGAAGGCGGAGCGTGAAGTAAAAGCATTGGCAAACTTGATCATGTAAATATT
GTTCACTACAATGGCTGTTGGGATGGATTTGATTATGATCCTGAGACCAGTGATGATTCT
CTTGAGAGCAGTGATTATGATCCTGAGAACAGCAAAAATAGTTCAAGGTCAAAGACTAAG
TGCCTTTTCATCCAAATGGAATTTCTGTGATAAAGGGACCTTGAACAATGGATTGAAAAA
AGAAGAGCGGAGAACTAGACAAAAGTTTTGGCTTTGGAACCTTTGAACAATAACAAAA
GGGGTGGATTATACATTCAAAAAATTAATTCATAGAGATCTTAAGCCAAGTAATATA
TTCTTAGTAGATACAAAACAAGTAAAGATTGGAGACTTTGGACTTGTAAACATCTCTGAAA
AATGATGGAAGCGAACAGGAGTAAGGGAACCTTTCGATACATGAGCCAGAACAGATT
TCTTCGCAAGACTATGGAAGGAAGTGGACCTCTACGCTTTGGGGCTAATTCTTGCTGAA
CTTCTTCATGTATGTGACTGCTTTTGAACATCAAAGTTTTTTCACAGACCTACGGGAT
GGCATCATCTCAGATATATTTGATAAAAAAGAAAACTTCTACAGAAATTAATCTCA
AAGAACTGAGGATCGACCTAACACATCTGAAATACTAAGGACCTTGACTGTGTGGAAG
AAAAGCCAGAGAAAAATGAACGACACACATGTTAG
    
```

Clone variation with respect to NM\_002759.2  
 887 a=>t;888 a=>g

**5' Read Nucleotide Sequence:**

```

>OriGene 5' read for mutant NM_002759 unedited
ACCGCGTCTCAGCAACTGGGCGGTAGGCGTGTACGGTGGGAGGTCTATATAAGCAGAGCTCGTTTAGT
GAACCGTCAGAACTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGGCACGAGGGCCGGCGGCG
GCGGCGGCGGCGGCGGCGCAGTTTCTGGAGCAAATTCAGTTTGCCTTCTGGATTTGTAAATCGTAA
TGACCTCAAACTTTAGCAGTTCTTCCATCTGACTCAGGTTTGCTTCTCTGGCGTCTTTCAGAAATCAACA
TCCACACTTTCCGTGATTATCTGCTGCATTTTGGACAAAGCTTCCAACCAGGATACGGGAAAAGAAAGA
AAATGGCTGGTTGATCTTTCAGCAGGTTTTCTTTCATGGGAGGACTTTAATACCATACCGTCAGAGGCA
GGGAGTAGTACCTAAATATCAGAACTGCCCTATTTTCAGGACCTCCCATGAATAGGAGGTTACCTTTTC
AAGTTTTAATAGATGGAAAAATTTCCAGGAGGTGAGGTAGATCAAAGGAGGGAGCAAAAAGCCGACCC
AATTGCTGTTGAAACCTAAATAGAAAAGAAAGCAGTATCCTTATATATGGCACACACAATCTTCAAGGTA
TCCTGGGGATTCCAGCCTTCAATAATTGGCCAAGAAGACTACGTGATTTGACATGGCTCTCGGTACATGC
CCAGATTTCTTAAATGCCAATGGCGAGAAATGTTGTCAGTTCTTAAACGAGACACACTGGCGTACTCGATC
CGATTACAGGACCTTGAATCGACTGCCGTTGGCACTTGAATCAAACCTTTAGACGACTCTGACTCAGATC
CGATCGATATT
    
```

<b>Kinase Domain Sequence:</b>	>SC323431 kinase domain raw sequence. By performing <a href="#">BLASTX</a> analysis with this sequence against NCBI reference protein database, you can confirm the presence of the kinase-deficient mutation TWTGATTATTGGCTCAGKGGWTTGGCCAAGTTTTCAAGCAAAACACAGAATTGACGGAAAGACTTACGTT ATTATGCGTGTAAATATAATAACGAGAAGGCGGAGCGTGAAGTAAAAGCATTGGCAAACTTGATCATG TAAATATTGTTCACTACAATGGCTGTTGGGATGGATTTGATTATGATCCTGAGACCAGTGATGATTCTCT TGAGAGCAGTGATTATGATCCTGAGAACAGCAAAAATAGTTCAAG
<b>Restriction Sites:</b>	Please inquire
<b>ACCN:</b>	NM_002759
<b>Insert Size:</b>	2580 bp
<b>OTI Disclaimer:</b>	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 <a href="mailto:custsupport@origene.com">custsupport@origene.com</a> 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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This kinase-deficient mutant clone was generated by created by site-directed mutagenesis from the corresponding wild-type clone. See details in "Application of active and kinase-deficient kinome collection for identification of kinases regulating hedgehog signaling." <a href="#">Cell, 2008 May p536-548.</a>
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"> <li>1. Centrifuge at 5,000xg for 5min.</li> <li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li> <li>3. Close the tube and incubate for 10 minutes at room temperature.</li> <li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li> <li>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.</li> </ol>
<b>RefSeq:</b>	<a href="#">NM_002759.1</a> , <a href="#">NP_002750.1</a>
<b>RefSeq Size:</b>	2808 bp
<b>RefSeq ORF:</b>	1656 bp
<b>Locus ID:</b>	5610
<b>UniProt ID:</b>	<a href="#">P19525</a>

<b>Cytogenetics:</b>	2p22.2
<b>Domains:</b>	pkinase, DSRM, TyrKc, S_TKc
<b>Protein Families:</b>	Druggable Genome, Protein Kinase, Transcription Factors
<b>Gene Summary:</b>	<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>