

## Product datasheet for **SC117190**

### **PAPSS2 (NM\_004670) Human Untagged Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	PAPSS2 (NM_004670) Human Untagged Clone
Tag:	Tag Free
Symbol:	PAPSS2
Synonyms:	ATPSK2; BCYM4; SK2
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC (PS100020)
E. coli Selection:	Ampicillin (100 ug/mL)



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**Fully Sequenced ORF:** >NCBI ORF sequence for NM\_004670, the custom clone sequence may differ by one or more nucleotides

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ATGTCGGGGATCAAGAAGCAAAGACGGAGAACCAGCAGAAATCCACCAATGTAGTCTATCAGGCCACC
ATGTGAGCAGGAATAAGAGAGGGCAAGTGGTTGGAACAAGGGGTGGGTTCCGAGGATGTACCGTGGCT
AACAGGTCTCTGTTGCTGAAAAACAACGATAAGTTTTGCCCTGGAGGAGTACCTTGTCTCCCATGCC
ATCCCTTGTACTCCCTGGATGGGGACAATGTCGGTCATGGCCTAACAGAAATCTCGGATTCTCTCCTG
GGGACAGAGAGGAAAATATCCGCCGATTGCTGAGGTGGCTAAGCTGTTTGTGATGCTGGTCTGGTCTG
CATTACCAGCTTTATTTCTCCATTTCGAAAGGATCGTGAGAATGCCCGAAAATACATGAATCAGCAGGG
CTGCCATTCTTTGAAATATTTGTAGATGCACCTCTAAATATTTGTAAAGCAGAGACGTAAGGCTCT
ATAAAAGGGCCAGAGCTGGGAGATTAAAGGATTTACAGGTATTGATTCTGATTATGAGAAACCTGAAAC
TCCTGAGCGTGTGCTTAAACCAATTTGTCCACAGTGAGTGACTGTCCACCAGGTAGTGAACCTCTG
CAAGAGCAGAACATTGTACCCTATACTATAATCAAAGATATCCACGAACTCTTTGTCCGAAAACAAC
TTGACCACGTCCGAGCTGAGGCTGAAACTCTCCCTTATTATCAATTACTAAGCTGGATCTCCAGTGGT
CCAGGTTTTGAGCGAAGGCTGGGCCACTCCCTCAAAGGTTTCATGCGGGAGAAGGAGTACTTACAGGTT
ATGCACTTTGACACCCTGCTAGATGATGGCGTGATCAACATGAGCATCCCATTTGACTGCCCGTCTCTG
CAGAGGATAAGACACGGCTGGAAGGGTGCAGCAAGTTTGTCTGGCACATGGTGGACGGAGGGTAGCTAT
CTTACGAGACGCTGAATTCTATGAACACAGAAAAGAGAACGCTGTTCCCGTGTGGGGGACAACATGT
ACAAAACACCCCATATCAAATGGTGATGAAAGTGGGACTGGCTGGTGGTGGAGACCTTCAGGTGC
TGGAGAAAATAAGATGGAATGATGGGCTGGACCAATACCGTCTGACACCTCTGGAGCTCAAACAGAAATG
TAAAGAAATGAATGCTGATGCGGTGTTGCATTCCAGTTGCGCAATCCTGTCCACAATGCCATGCCCTG
TTGATGCAGGACACTCGCCGAGGCTCCTAGAGAGGGGCTACAAGCACCCGGTCTCTACTACACCTCT
TGGGCGGCTGGACCAAGGATGACGATGTGCCTCTAGACTGGCGGATGAAGCAGCAGCGGCTGTGCTCGA
GGAAGGGTCTGGATCCCAAGTCAACCATTGTTGCCATCTTCCGTCTCCCATGTTATATGCTGGCCCC
ACAGAGGTCCAGTGGCACTGCAGGTCCCGGATGATTGCGGGTGCCAATTTCTACATTGTGGGGAGGGACC
CTGCAGGAATGCCCCATCTGAAACCAAGAAGGATCTGTATGAACCCACTCATGGGGCAAGGTCTTGAG
CATGGCCCTGGCTCACCTCTGTGAAATCATTCCATTCCGAGTGGCTGCCTACAACAAAGCCAAAAAA
GCCATGGACTTCTATGATCCAGCAAGGCACAATGAGTTTGACTTCATCTCAGGAAGTCAATGAGGAAGC
TCGCCCGGAAGGAGAGAATCCCCAGATGGCTCATGGCCCCAAAGCATGGAAGTCTGACAGATTA
TTACAGGTCCCTGGAGAAGAACTAA
    
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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_004670 unedited

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NAAATAATAACCCCGCCCGTTGNCGCAAAGGGCGGTAGGCGGTACGGTGGGAGGTCTA
TATAAGCAGAGCTCATTTAGGTGACACTATAGAATACAAGCTACTTGTCTTTTTGCAGC
GGCCCGCAATTCGCGACGAGGCCGCCGCCGCCGCCGCTCCCTGCGTCTTCGGTCTCT
GCTCCCGGACCCGGGCTCCGCCGAGCCAGCCAGCATGTCGGGGATCAAGAAGCAAAG
ACGGAGAACCAGCAGAAATCCACCAATGTAGTCTATCAGGCCACCATGTGAGCAGGAAT
AAGAGAGGGCAAGTGGTTGGAACAAGGGGTGGTTCGAGGATGTACCGTGTGGCTAACA
GGTCTCTCTGGTCTGAAAAACAACGATAAGTTTTGCCCTGGAGGAGTACCTTGTCTCC
CATGCCATCCCTTGTACTCCCTGGATGGGGACAATGTCCGTATGGCCTAACAGAAAT
CTCGGATTCTCTCTGGGACAGAGAGGAAAATATCCGCCGATTGCTGAGGTGGCTAAG
CTGTTTGTGATGCTGGTCTGGTCTGCATTACCAGCTTTATTTCTCCATTCGAAAGGAT
CGTGAGAAATGCCGCAAATACATGAATCAGCAGGGCTGCCATTCTTTGAAATATTTGTA
GATGCACCTCTAAATATTTGTGAAAGCAGAGACGTAAGGCTCTATAAAGGGCCAGA
GCTGGGGAGATTAAGGATTTACAGGTATTGATTCTGATTATGAGAAACCTGAAACTCT
GAGCGTGTGCTTAAACCAATTTGTCCCAGTGAGTGACTGTGNTACCAGGTAGTGAAC
TCTGCAGAGCAGACATTGTACCTATACTATAATCAAGAATCCACGACTCTTGTGCCGTAC
ACAACCTG
    
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<b>3' Read Nucleotide Sequence:</b>	<p>&gt;OriGene 3' read for NM_004670 unedited            NGGTATTTACTATGTNACCGCGGCCGCTTTTCTANNATCGAGTTTTTTTTTTTTTTTTTTTT            AAAGGCGTAGTGAGTAACCGATTACATGAGTATAGGCACTATACTATTAAGACAAACTG            CTGTGGCCATTGTGTGTAACCTATTCTCAAAGAACTTTTGTAGTTAAGATTAGTGTTT            TTTAAGAATGAGAATATGAAAATTGTCACAGTTTTCTCTTCTAATTTAGGTCTCTTCCA            GAGAGACCTATATATTAAGGTGCTGTTTCTCACTTTATTCCTTGGCAACAATGAATT            ATGCATAAAGTAAAAACATTGCCTCTCAGGAAGTAAAGCCATCAGAAGATGTCTCAGAAC            AGCTTGAAATCTTTGGAATAGCTTTTTTTTTTTTTTCAACTGCAATAAAATCAGTGCAGTT            CAGAAAACCTCGACCTTTAGTATCCGAGAAGGCAGCTTTGTAAGCACTTTTTGTTGAGG            AACTTTGTTTAACCGCTGAGGGGAATCTGACCCAGCTCCTGGGTATCTGGTGTAAACAG            GGCACCCCACTGGGAGTTAAGTGGGCTGGGGGCTTTTTACTGGCCCCAGCCCTTCTAA            TAATGGGCAAATTACCTTTTTGTACGGGCTCACCGCTTAAAAACACATACTGTGGCTC            ATTACAGTTTGTACCTGTTAAAGAAAGGTGGACTTTTGGTTTCTCGGGGCCTTTC            CCCCTTTAGGGCCCTTGCTGTCTCGAAAAGGGGAATTTTTTTTATACACTGGCCTC            TTTCTCGTTAGGGCCTTCTTTTTTCCGAAACCCTTGTCCCCGCAACGGGGGAAG            AAAATTTTCCCACCATTGCCCCCTTGGTGAAGTCCTTTTTCCAAAACCGTTGCCTT</p>
<b>Restriction Sites:</b>	NotI-NotI
<b>ACCN:</b>	NM_004670
<b>Insert Size:</b>	4700 bp
<b>OTI Disclaimer:</b>	<p>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.</p> <p>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></p>
<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_004670.3</a> , <a href="#">NP_004661.2</a>
<b>RefSeq Size:</b>	3859 bp

RefSeq ORF:	1845 bp
Locus ID:	9060
UniProt ID:	<a href="#">O95340</a>
Cytogenetics:	10q23.2-q23.31
Domains:	ATP-sulfurylase, APS_kinase
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Purine metabolism, Selenoamino acid metabolism, Sulfur metabolism
Gene Summary:	<p>Sulfation is a common modification of endogenous (lipids, proteins, and carbohydrates) and exogenous (xenobiotics and drugs) compounds. In mammals, the sulfate source is 3'-phosphoadenosine 5'-phosphosulfate (PAPS), created from ATP and inorganic sulfate. Two different tissue isoforms encoded by different genes synthesize PAPS. This gene encodes one of the two PAPS synthetases. Defects in this gene cause the Pakistani type of spondyloepimetaphyseal dysplasia. Two alternatively spliced transcript variants that encode different isoforms have been described for this gene. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1) represents the more frequently occurring transcript. It encodes isoform a, which has also been named PAPS synthase 2a.</p>