

Product datasheet for **SC323891**

P5CS (ALDH18A1) (NM_002860) Human Untagged Clone

Product data:

Product Type: Expression Plasmids
Product Name: P5CS (ALDH18A1) (NM_002860) Human Untagged Clone
Tag: Tag Free
Symbol: P5CS
Synonyms: ADCL3; ARCL3A; GSAS; P5CS; PYCS; SPG9; SPG9A; SPG9B
Mammalian Cell Selection: Neomycin
Vector: pCMV6-AC (PS100020)
E. coli Selection: Ampicillin (100 ug/mL)

Fully Sequenced ORF: >OriGene sequence for NM_002860.3
 TCGCGACCCGCGTAGTGCCAGGGGCGAAGCGCGGTGGTGAGGAAGATACTTTGGTT
 AGTGACCACATCGCAGCATGTTGAGTCAAGTTTACCGCTGTGGTTCCAGCCCTCAACC
 AACATCTTCTGCCTGGGTCAAGTGTACAACCGTCTTCAGATCTATTGTATCCAGCCTT
 CAGTCATCAGACATGTTCTGTTCTTGAGCAACATCCCGTTTATCACTGTACCCCTCAGTC
 GTACACATGGCAAGTCTTCGCCACCGCAGTGAGCTGAAGCATGCCAAGAGAATCGTGG
 TGAAGCTCGGCAGTGCCGTGGTACCCGAGGGGATGAATGTGGCCTGGCCCTGGGGCGCT
 TGGCATCTATTGTTGAGCAGGTATCAGTGCTGCAGAATCAGGGCAGAGAGATGATGCTGG
 TGACCAGTGGAGCCGTAGCCTTTGGCAAACAACGCTTGCGCCATGAGATCCTTCTGTCTC
 AGAGCGTGCAGGAGCCCTCCACTCGGGCAGAACAGCTGAAAGAAATGGCAATCCAG
 TCTTAGAGGCACGAGCCTGTGCAGCTGCCGACAGAGTGGGCTGATGGCCTTGTATGAGG
 CTATGTTTACCCAGTACAGCATCTGTGCTGCCAGATTTTGGTGACCAATTTGGATTTCC
 ATGATGAGCAGAAGCGCCGGAACCTCAATGGAACACTTCATGAACTCCTTAGAATGAACA
 TTGTCCCCATTGTCAACACAAATGATGCTGTTGTCCCCCAGCTGAGCCCAACAGTGACC
 TGCAGGGGGTAAATGTTATTAGTGTTAAAGATAATGATAGCCTGGCTGCCGACTGGCTG
 TGGAAATGAAACTGATCTCTTGATTGTTCTTTTCAGATGTAGAAGGCCTTTTTCAGAGCC
 CCCCAGTTTCAGATGATGCAAAGCTTATTGATATATTTTATCCCGGAGATCAGCAGTCTG
 TGACATTTGGAATCAAGTCTAGAGTGGGAATGGGTGGCATGGAAGCCAAGGTGAAAGCAG
 CCCTCTGGGCTTTGCAAGGTGGCACTTCTGTTGTTATTGCCAATGGAACCCACCCAAAGG
 TGTCTGGGCACGTCATCACAGACATTGTGGAGGGGAAGAAAGTTGGTACCTTCTTTTCAG
 AAGTAAAGCCTGCAGGCCCTACTGTTGAGCAGCAGGGAGAAATGGCGCATCTGGAGGAA
 GGATGTTGGCCACCTTGGAACTGAGCAGAGAGCAGAAATATCCATCATCTGGCTGATC
 TGTGACGGACCAGCGTATGAGATCCTGTTAGCCAACAAAAAGACTTGGAGGAGGCAG
 AGGGGAGACTTGCAGCTCCTCTGCTGAAACGTTTAAAGCCTCTCCACATCCAAATTGAACA
 GCCTGGCCATCGGTCTGCGACAGATCGCAGCCTCCTCCAGGACAGCGTGGGACGTGTTT
 TGCGCCGACCCGAATCGCCAAAACTTGAAGTGAACAAGTACTGTCCCAATTGGAG
 TTCTGCTGGTGATCTTTGAATCTCGTCCTGACTGTCTACCCAGGTGGCAGCTTTGGCTA



[View online »](#)

```
TCGCAAGTGGCAATGGCTTGTACTCAAAGGAGGGAAGGAGGCTGCACACAGCAACCGGA
TTCTCCACCTCCTGACCCAGGAGGCTCTCTCAATCCATGGAGTCAAGGAGGCCGTGCAAC
TGGTGAATACCAGAGAAGAAGTTGAAGATCTTTGCCGCC TAGACAAAATGATAGATCTGA
TCATTCCACGTGGCTCTTCCCAGCTGGTCAGAGACATCCAGAAAGCTGCTAAGGGGATTC
CAGTGATGGGGCACAGCGAAGGGATCTGTCACATGTATGTGGATTCCGAGGCCAGTGTG
ATAAGGTCACCAGGCTAGTCAGAGACTCTAAATGTGAATATCCAGCTGCCTGTAATGCTT
TGGAGACTTTGTTAATCCACCGGGATCTGCTCAGGACACCATTATTTGACCAGATCATTG
ATATGCTGAGAGTGAACAGGTA AAAAATTCATGCAGGCCCAAATTTGCCTCCTATCTGA
CCTTCAGCCCCTCCGAAGTGAAGTCACTCCGAACTGAGTATGGGGACCTGGAATTATGCA
TTGAAGTAGTGGACAACGTTT CAGGATGCCATTGACCACATCCACAAGTATGGCAGCTCCC
ACACGGATGTCATCGTCCAGAGGACGAAAACACAGCGGAGTTCTTCTGCAGCACGTAG
ACAGTGCCTGTGTCTTGGAA TGCCAGCACTCGCTTTTCTGATGGTTACCGCTTTGGAC
TGGGAGCTGAAGTGGGAATCAGTACATCGAGAATCCACGCCCGGGGACCAGTAGGACTTG
AGGGACTGCTTACTACTAAGTGGCTGCTGCGAGGGAAGGACCACGTGGTCTCAGATTTCT
CAGAGCATGGAAGTTTAAATATCTTCATGAGAACCTCCCTATTCTCAGAGAAACACCA
ACTGAAAAGAGCCAGGAAAACCCGGGAATTTTCCAAAAGGTCTTCACGTTAAACTGTCT
TATCTCAGGAGAGAGCCCGCTCTGTCTCCAGTTCTGGTAGGGTCTGCCTGTTGGAAA
GTGTACCTGGATGCTTCTGGGCTCCGTTTGGCAATAGCAATCTTGGCTGATGTGCACAGT
CTGGCTCCAGCTCACCTTTTTTTTTAAAGTAAGAAAATAGTTGCTACCGATAGGGACT
TTGCCAAGTCCAATTATCTTCTAGGATTGAAAGGTGCATTTTCCCATAAAAAAGGCGAG
GAAAACCCATGGCTGCTTGTGTACCTCAGTGACTTACAGTCCCCCTTGGCATTTAGTT
GGTACTAGAGCCAGTCATCCTTAACAAAATCTTTTACATTTTATTTCTTTTACATGTAGT
CATCTTCAAAAAGGAAAGATTTGGAATTTAGAAAAGGGGCAACTCTTCTTTTAGCATT
CTCATCAGAAAAGTCACAAAATCGATGGAATCATTTCCTGGAAGATTGACCTTTTGT
ATTTATTTGTGGGTAATAAATAAGCATTCCAGATGCTTGACAGTTCCTGCATCCAGGA
GATGCTGTGTTCCCGTGATGCAGCTGGAACCAAGCTGCAGCAGGAGATGCAAGTTTCA
GGATGTTCCCACTGAGCTGGAGGAATATCTACAGCAGTATGCTTGAATTTTTGTATG
AATTATTTTGTGCTCCTACCCTTTTCTCCAAAACAAAATAGAGGATTATTTAATAC
TTTGGATTCTCCCTTTTTTGTAGAAAATAAGTTTTTTATGAAAAAAAAAAAAAAAA
```

- Restriction Sites:** ECoRI-NOT
- ACCN:** NM_002860
- OTI Disclaimer:** Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
- OTI Annotation:** This TrueClone is provided through our Custom Cloning Process that includes sub-cloning into OriGene's pCMV6 vector and full sequencing to provide a non-variant match to the expected reference without frameshifts, and is delivered as lyophilized plasmid DNA.
- 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:	<ol style="list-style-type: none">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_002860.3 , NP_002851.2
RefSeq Size:	3470 bp
RefSeq ORF:	2388 bp
Locus ID:	5832
UniProt ID:	P54886
Cytogenetics:	10q24.1
Domains:	aakinase, aldedh
Protein Families:	Druggable Genome
Protein Pathways:	Arginine and proline metabolism, Metabolic pathways
Gene Summary:	<p>This gene is a member of the aldehyde dehydrogenase family and encodes a bifunctional ATP- and NADPH-dependent mitochondrial enzyme with both gamma-glutamyl kinase and gamma-glutamyl phosphate reductase activities. The encoded protein catalyzes the reduction of glutamate to delta1-pyrroline-5-carboxylate, a critical step in the de novo biosynthesis of proline, ornithine and arginine. Mutations in this gene lead to hyperammonemia, hypoonithinemia, hypocitrullinemia, hypoargininemia and hypoprolinemia and may be associated with neurodegeneration, cataracts and connective tissue diseases. Alternatively spliced transcript variants, encoding different isoforms, have been described for this gene. [provided by RefSeq, Jul 2008]</p> <p>Transcript Variant: This variant (1), also known as P5CSL, encodes the longest isoform (1). Variants 1, 4, and 5 all encode the same isoform (1).</p>