

Product datasheet for **SC117775**

ALAD (NM_000031) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ALAD (NM_000031) Human Untagged Clone
Tag:	Tag Free
Symbol:	ALAD
Synonyms:	ALADH; PBGS
Vector:	<u>pCMV6-XL4</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Cell Selection:	None
Fully Sequenced ORF:	>NCBI ORF sequence for NM_000031, the custom clone sequence may differ by one or more nucleotides

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ATGCAGCCCCAGTCCGTTCTGCACAGCGGCTACTTCCACCCACTACTTCGGGCCTGGCAGACAGCCACCA  
CCACCCTCAATGCCTCCAACCTCATCTACCCCATCTTTGTACGGATGTTCTGTGATACAGCCTAT  
CACCAGCCTCCCAGGAGTGGCCAGGTATGGTGTGAAGCGGCTGGAAGAGATGCTGAGGCCCTTGGTGGAA  
GAGGGCCTACGCTGTGTCTTGTATCTTTGGCGTCCCAGCAGAGTCCCAAGGACGAGCGGGTCCGCGAG  
CTGACTCCGAGGAGTCCCAGCTATTGAGGCAATCCATCTGTTGAGGAAGACCTCCCCAACCTCCTGGT  
GGCCTGTGATGTCTGCCTGTGTCCCTACACCTCCCATGGTCACTGCGGGCTCCTGAGTGAACCGGAGCA  
TTCCGGGCTGAGGAGAGCCGCCAGCGGCTGGCTGAGGTGGCATTGGCGTATGCCAAGGCAGGATGTCAGG  
TGGTAGCCCCGTGCGACATGATGGATGGACGCGTGAAGCCATCAAGAGGCCCTGATGGACATGGACT  
TGGCAACAGGGTATCGGTGATGAGCTACAGTGCCAAATTTGCTTCCTGTTTCTATGGCCCTTCCGGGAT  
GCAGCTAAGTCAAGCCAGCTTTTGGGGACCGCGCTGTACCAGCTGCCCTGGAGCAGGAGGCTGG  
CTCTCCGAGCTGTGGACCGGATGTACGGGAAGGAGCTGACATGCTCATGGTGAAGCCGGGAATGCCCTA  
CCTGGACATCGTGCAGGAGGTAAAGGACAAGCACCTGACCTCCCTCTCGCCGTGTACCAGTCTCTGGA  
GAGTTTGCCATGCTGTGGCATGGAGCCCAGGCCGGGCATTTGATCTCAAGGCTGCCGTACTGGAGGCCA  
TGACTGCCTTCCGAGAGCAGGTGCTGACATCATCACCTACTACACCCGACGCTGCTGCAGTGGCT  
GAAGGAGGAATGA
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5' Read Nucleotide Sequence:

>OriGene 5' read for NM_000031 unedited
 GTCAAAATTGTAACGACTCACTATAGGCGGCCGGAATTCGCACGAGCCAATGCCCCAG
 GAGCCCTCGGTTCCAACCAACTGATGCCCTGTGCCACTGGCCACGCCATGCAGCCCC
 AGTCCGTTCTGCACAGCGGCTACTTCCACCCACTACTTCGGGCCCTGGCAGACAGCCACCA
 CCACCCCTAATGCCTCCAACCTCATCTACCCCATCTTTGTACGGATGTTCTGATGACA
 TACAGCCTATCACCAGCCTCCCAGGAGTGGCCAGGTACGGTGTGAAGCGGCTGGAAGAGA
 TGCTGAGGCCCTTGGTGAAGAGGGCCTACGCTGTGTCTTGATCTTTGGCGTCCCAGCA
 GAGTTCCAAGGACGAGCGGGTTCCGCACTGACTCCGAGGAGTCCCCAGCTATTGAGG
 CAATCCATCTGTTGAGGAAGACCTTCCCCAACCTCCTGGTGGCCTGTGATGTCTGCCTGT
 GTCCTACACCTCCCATGGTCACTGCGGGCTCCTGAGTAAAACGGAGCATTCCGGGCTG
 AGGAGAGCCGCCAGCGGCTGGCTGAGGTGGCATTGGCGTATGCCAAGGCAGGATGTCAGG
 TGGTAGCCCCGTCGGACATGATGGATGGACGCGTGAAGCCATCANAGAGGCCCTGATGG
 CACATGGACTTGGCAACAGGGTATCGGTGATGAGCTACAGTGCCAAATTTGCTTCTGTT
 TCTATGGCCCTTCCGGGATGCAGCTAAGTCAAGCCCAGCTTTTGGNGACCGNCGCTGCT
 ACCAGCTNGCCCTGGAGCACGAAGCCTGGCTCTCCGAGCTGTGGACGGGNATGTACGGG
 AAGGAGCTGAATGCTCATGGTGAACNGGNATGCCCTACCTGGACTCGTCCGGNAGGTAA
 AGACAAGACCCGGACTCCTTTTCGCGGTACACGCTTGGAAATTTGCCGA

3' Read Nucleotide Sequence:

>OriGene 3' read for NM_000031 unedited
 NNNNNCCCCCTAGGAGATGGCACTTCCAGGCCAGAAAAGCACTGGGGNAGGGTCACA
 GGNATGCCACCCGGGTTCTGTTCAAGAAACAGCTATGACCGCGGCCGCAATCTAGAGTCG
 AGTTTTTCTTTTTTTTTTATTGTACTTCAAAAATTGAATTTTTAATCAAAATCTTTAT
 AAATTTATTACAATATAGATTTTGTGATGCATACCTTTGCCCACTGCAGGCTAATGTGAG
 TGTTCTGAGCAAGTTTAAGGCAGGCTAGGCTAACCTATGATGTTTGAAGTTAGGTATA
 TTAATAACATTTTACTCAGCATATTTTTCAACTTATGATCACATTTTCAACTTAGG
 ACGGGTTTATCAGGATGCAGACCATCACATAAATGGAGGGGTGCCATAAGACATTGCT
 AGACCTATAAATTTGCTGTTGAATAATGGAGGTTGGTATGGCACAGTGGTTAGGGGCATA
 GGCTTGGAGTTGGACTACATGGGTTCAAATCCCAGCTTGGCTGTTTTCTGTGCATTCT
 AATCCAGTTCTGCCACAACTTGTGAGTGGCCTTAAGTACTCACATTAGCACTCTAGA
 TATAGTTCTTATGTGGAAAAGGCGCAAGCAAATTTAGTATTCTCCCTCCACCCCGAC
 CATGCTTCTGTTCTCATCCAGGCTGCCCATCTTAGTAAATGGACCATCAACCACCGCG
 AAGTCAAGCCAAATTAATCCTTACATCGGATCTACCTTCTAAACACATCCCCGGTCCCA
 TTTCCCTTCTCCATCGCACTGTCCCGGTCCGGTCCATGACAAGAAGAATTTTCAAT

Restriction Sites:

NotI-NotI

ACCN:

NM_000031

Insert Size:

3700 bp

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).

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:	<u>NM_000031.4, NP_000022.2</u>
RefSeq Size:	3151 bp
RefSeq ORF:	1020 bp
Locus ID:	210
UniProt ID:	<u>P13716</u>
Cytogenetics:	9q32
Domains:	ALAD
Protein Families:	Druggable Genome
Protein Pathways:	Metabolic pathways, Porphyrin and chlorophyll metabolism
Gene Summary:	<p>The ALAD enzyme is composed of 8 identical subunits and catalyzes the condensation of 2 molecules of delta-aminolevulinate to form porphobilinogen (a precursor of heme, cytochromes and other hemoproteins). ALAD catalyzes the second step in the porphyrin and heme biosynthetic pathway; zinc is essential for enzymatic activity. ALAD enzymatic activity is inhibited by lead and a defect in the ALAD structural gene can cause increased sensitivity to lead poisoning and acute hepatic porphyria. Alternative splicing of this gene results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Dec 2015]</p> <p>Transcript Variant: This variant (2) lacks a segment of the coding region and initiates translation from an alternate start codon, compared to variant 1. The resulting isoform (b) has a distinct N-terminus, compared to isoform a.</p>