

## Product datasheet for SC300120

### ADH7 (NM\_000673) Human Untagged Clone

#### Product data:

Product Type:	Expression Plasmids
Product Name:	ADH7 (NM_000673) Human Untagged Clone
Tag:	Tag Free
Symbol:	ADH7
Synonyms:	ADH4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
Fully Sequenced ORF:	>SC300120 representing NM_000673. Blue=Insert sequence Red=Cloning site Green=Tag(s)

GCTCGTTTAGTGAACCGTCAGAATTTTGTAAACGACTCACTATAGGGCGGCCGGAATTCGTCGACTG  
 GATCCGGTACCGAGGAGATCTGCCGCC**CGATCGCC**  
 ATGTTTGAGAAATACAGATCCAAGACAAAGACAGGATGGGCACTGCTGGAAAAGTTATTAATGCAAA  
 GCAGCTGTGCTTTGGGAGCAGAAGCAACCCTTCTCCATTGAGGAAATAGAAGTTGCCCCACCAAGACT  
 AAAGAAGTTCGCATTAAGATTTTGGCCACAGGAATCTGTCGCACAGATGACCATGTGATAAAGGAACA  
 ATGGTGTCCAAGTTTCCAGTGATTGTGGGACATGAGGCAACTGGGATTGTAGAGAGCATTGGAGAAGGA  
 GTGACTACAGTGAACCCAGGTGACAAAGTCATCCCTCTCTTTCTGCCACAATGTAGAGAATGCAATGCT  
 TGTGCAACCCAGATGGCAACCTTTCATTAGGAGCGATATTACTGGTCGTGGAGTACTGGCTGATGGC  
 ACCACCAGATTTACATGCAAGGGCAAACAGTCCACCCTTCATGAACACCAGTACATTTACCGAGTAC  
 ACAGTGGTGGATGAATCTTCTGTTGCTAAGATTGATGATGCAGCTCCTCCTGAGAAAAGTCTGTTAATT  
 GGCTGTGGGTTTTCCACTGGATATGGCGCTGCTGTTAAACTGGCAAGGTCAAACCTGGTTCCACTTGC  
 GTCGTCTTTGGCCTGGGAGGAGTTGGCCTGTCAGTCATCATGGGCTGTAAGTCAGCTGGTGCATCTAGG  
 ATCATTGGGATTGACCTCAACAAAGACAAATTTGAGAAGGCCATGGCTGTAGGTGCCACTGAGTGTATC  
 AGTCCAAGGACTCTACCAAAACCATCAGTGAGGTGCTGTCAGAAATGACAGGCAACAACGTGGGATAC  
 ACCTTTGAAGTTATTGGGCATCTTGAAACCATGATTGATGCCCTGGCATCCTGCCACATGAACATGGG  
 ACCAGCGTGGTTGTAGGAGTTCTCCATCAGCCAAGATGCTCACCTATGACCCGATGTTGCTCTTCACT  
 GGACGCACATGGAAGGGATGTGTCTTTGGAGTTTGAAAAGCAGAGATGATGTCCCAAAACTAGTGACT  
 GAGTTCCTGGCAAAGAAATTTGACCTGGACCAGTTGATAACTCATGTTTTACCATTTAAAAAATCAGT  
 GAAGGATTTGAGCTGCTCAATTCAGGACAAAGCATTGCAACGGTCCTGACGTTTTGA  
**ACGCGT**ACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGAT  
 TACAAGGATGACGACGATAAGGTTTAAACGGCCGGC

Restriction Sites: SgfI-MluI



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<b>ACCN:</b>	NM_000673
<b>Insert Size:</b>	1161 bp
<b>OTI Disclaimer:</b>	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).
<b>OTI Annotation:</b>	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.
<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>	<u><a href="#">NM_000673.4</a></u>
<b>RefSeq Size:</b>	2307 bp
<b>RefSeq ORF:</b>	1161 bp
<b>Locus ID:</b>	131
<b>UniProt ID:</b>	<u><a href="#">P40394</a></u>
<b>Cytogenetics:</b>	4q23
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Drug metabolism - cytochrome P450, Fatty acid metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Retinol metabolism, Tyrosine metabolism
<b>MW:</b>	41.5 kDa



**Gene Summary:**

This gene encodes class IV alcohol dehydrogenase 7 mu or sigma subunit, which is a member of the alcohol dehydrogenase family. Members of this family metabolize a wide variety of substrates, including ethanol, retinol, other aliphatic alcohols, hydroxysteroids, and lipid peroxidation products. The enzyme encoded by this gene is inefficient in ethanol oxidation, but is the most active as a retinol dehydrogenase; thus it may participate in the synthesis of retinoic acid, a hormone important for cellular differentiation. The expression of this gene is much more abundant in stomach than liver, thus differing from the other known gene family members. Alternative splicing results in multiple transcript variants. [provided by RefSeq, Oct 2009]

Transcript Variant: This variant (2) differs in the 5' UTR and 5' coding region, compared to variant 1, resulting in an isoform (2) that has a distinct N-terminus and is shorter than isoform 1. CCDS Note: This CCDS representation uses the 5'-most in-frame start codon, which is conserved in higher primates. An alternative downstream start codon, which is more widely conserved and has a stronger Kozak signal, also exists. It is possible that leaky scanning by ribosomes would allow the downstream start codon to be used, at least some of the time. The use of the downstream start codon would result in a protein that is 12 aa shorter at the N-terminus. There is no experimental evidence showing which start codon is preferentially used in vivo.