

Product datasheet for **RC224304**

ADH7 (NM_000673) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ADH7 (NM_000673) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ADH7
Synonyms:	ADH4
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC224304 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGTTTGCAGAAATACAGATCCAAGACAAAGACAGGATGGGCACTGCTGGAAAAGTTATTAATGCAAAG
CAGCTGTGCTTTGGGAGCAGAAGCAACCCTTCTCCATTGAGGAAATAGAAGTTGCCCCACCAAAGACTAA
AGAAGTTCGCATTAAGATTTGGCCACAGGAATCTGTCGCACAGATGACCATGTGATAAAAGGAACAATG
GTGTCCAAGTTCCAGTGATTGTGGGACATGAGGCAACTGGGATTGTAGAGAGCATTGGAGAAGGAGTGA
CTACAGTGAAACCAGGTGACAAAGTCATCCCTCTCTTTCTGCCACAATGTAGAGAATGCAATGCTTGTGC
CAACCCAGATGGCAACCTTTGCATTAGGAGCGATATTACTGGTCGTGGAGTACTGGCTGATGGCACCACC
AGATTTACATGCAAGGGCAAACCCAGTCCACCACCTTCATGAACACCAGTACATTTACCGAGTACACAGTGG
TGGATGAATCTTCTGTTGCTAAGATTGATGATGCAGCTCCTCCTGAGAAAAGTCTGTTAATTGGCTGTGG
GTTTTCCACTGGATATGGCGCTGCTGTTAAAATGGCAAGGTCAAACCTGGTTCCACTTGGCTGCTCTTT
GGCCTGGGAGGAGTTGGCCTGTCAGTTCATGAGGCTGTAAGTCAGCTGGTGCATCTAGGATCATTGGGA
TTGACCTCAACAAAGACAAATTTGAGAAGGCCATGGCTGTAGGTGCCACTGAGTGTATCAGTCCCAAGGA
CTCTACCAAAACCCATCAGTGAGGTGCTGTCAGAAATGACAGGCAACAACGTGGGATACACCTTTGAAGTT
ATTGGGCATCTTGAACCATGATTGATGCCCTGGCATCCTGCCACATGAACACTATGGACCAAGCGTGGTTG
TAGGAGTTCCTCCATCAGCCAAGATGCTCACCTATGACCCGATGTTGCTCTTCACTGGACGCACATGGAA
GGGATGTGTCTTTGGAGTTTGAAGAGCAGAGATGATGTCCAAAACACTAGTACTGAGTTCCTGGCAAAG
AAATTTGACCTGGACAGTTGATAACTCATGTTTTACCATTTAAAAAATCAGTGAAGGATTTGAGCTGC
TCAATTCAGGACAAAGCATTGCAACGGTCTGACGTTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC224304 protein sequence
Red=Cloning site Green=Tags(s)

MFAEIQIQDKDRMGTAGKVIKCKAAVLWEQKQPFSEIEIEVAPPKTKEVRIKILATGICRTDDHVIKGTM
VSKFPVIVGHEATGIVESIGEGVTTVKPGDKVIPLFLPQCRCNACRNPDGNLCIRSDITGRGVLADGTT
RFTCKGKPVVHHFMTSTFTEYTVVDESSVAKIDDAAPPEKVCLIGCGFSTGYGAAVKTKGVKPGSTCVVF
GLGGVGLSVIMGCKSAGASRIIGIDLNKDKFEKAMAVGATECISPKDSTKPISEVLSEMTGNNVGYTFEV
IGHLETMIDALASCHMNYGTSVVVGVPPSAKMLTYDPMLLFTGRTWKGCVFGLKSRDDVPKLVTEFLAK
KFDLDQLITHVLPFKKISEGFELLNSGQSIRTVLTF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6440_a05.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_000673

ORF Size: 1158 bp

OTI Disclaimer: 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. [More info](#)

OTI Annotation: This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.

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:

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_000673.4](#), [NP_000664.2](#)

RefSeq Size: 2307 bp

RefSeq ORF: 1125 bp

Locus ID: 131

UniProt ID: [P40394](#)

Cytogenetics: 4q23

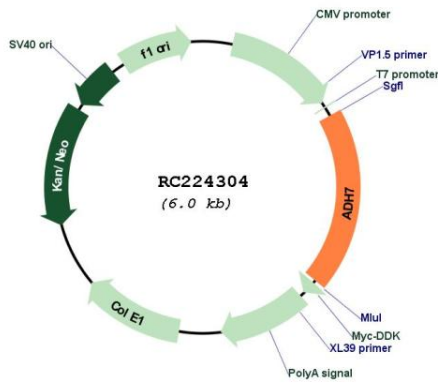
Protein Families: Druggable Genome

Protein Pathways: Drug metabolism - cytochrome P450, Fatty acid metabolism, Glycolysis / Gluconeogenesis, Metabolic pathways, Metabolism of xenobiotics by cytochrome P450, Retinol metabolism, Tyrosine metabolism

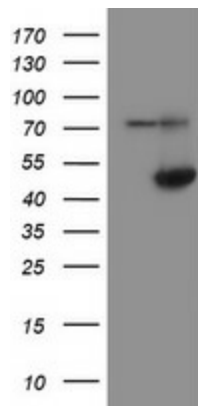
MW: 41.5 kDa

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]

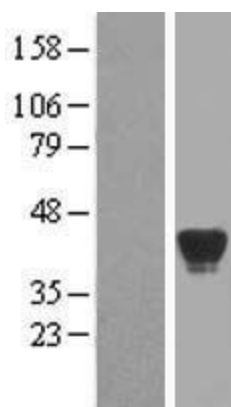
Product images:



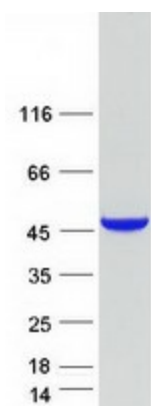
Circular map for RC224304



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ADH7 (Cat# RC224304, Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-ADH7 (Cat# [TA504873]). Positive lysates [LY424575] (100ug) and [LC424575] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424575]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC224304 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ADH7 protein (Cat# [TP324304]). The protein was produced from HEK293T cells transfected with ADH7 cDNA clone (Cat# RC224304) using MegaTran 2.0 (Cat# [TT210002]).