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# Product datasheet for RC215367

## Alcohol Dehydrogenase (ADH1A) (NM_000667) Human Tagged ORF Clone

### Product data:

| | |
|---|---|
| **Product Type:** | Expression Plasmids |
| **Product Name:** | Alcohol Dehydrogenase (ADH1A) (NM_000667) Human Tagged ORF Clone |
| **Tag:** | Myc-DDK |
| **Symbol:** | Alcohol Dehydrogenase |
| **Synonyms:** | ADH1 |
| **Mammalian Cell Selection:** | Neomycin |
| **Vector:** | pCMV6-Entry (PS100001) |
| **E. coli Selection:** | Kanamycin (25 ug/mL) |
| **ORF Nucleotide Sequence:** | >RC215367 representing NM_000667<br>Red=Cloning site Blue=ORF Green=Tags(s)<br><br>TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC<br>GCCGCGATCGCC<br><br>ATGAGCACAGCAGGAAAAGTAATCAAATGCAAAGCAGCTGTGCTATGGGAGTTAAAGAAACCCTTTTCCA<br>TTGAGGAGGTAGAGGTTGCACCTCCTAAGGCTCATGAAGTTCGCATTAAGATGGTGGCTGCAGGAATCTG<br>TCGTTCAGATGAGCATGTGGTTAGTGGCAACCTGGTGACCCCCCTTCCTGTGATTTTAGGCCATGAGGCA<br>GCCGGCATCGTGGAAAGTGTTGGAGAAGGGGTGACTACAGTCAAACCAGGTGATAAAGTCATCCCGCTCT<br>TTACTCCTCAGTGTGGAAAATGCAGAATTTGTAAAAACCCAGAAAGCAACTACTGCTTGAAAAATGATCT<br>AGGCAATCCTCGGGGGACCCTGCAGGATGGCACCAGGAGGTTCACCTGCAGCGGGAAGCCCATCCACCAC<br>TTCGTCGGCGTCAGCACCTTCTCCCAGTACACGGTGGTGGATGAGAATGCAGTGGCCAAAATTGATGCAG<br>CCTCGCCCCTGGAGAAAGTCTGCCTCATTGGCTGTGGATTTTCGACTGGTTATGGGTCTGCAGTCAAGGT<br>TGCCAAGGTCACCCCAGGGTCTACCTGTGCTGTGTTTGGCCTGGGAGGGGTCGGCCTATCTGTTGTTATG<br>GGCTGTAAAGCAGCTGGAGCAGCCAGAATCATTGCTGTGGACATCAACAAGGACAAATTTGCAAAGGCTA<br>AAGAGTTGGGTGCCACTGAATGCATCAACCCTCAAGACTACAAGAAACCCATTCAGGAAGTGCTAAAGGA<br>AATGACTGATGGAGGTGTGGATTTTTCGTTTGAAGTCATCGGTCGGCTTGACACCATGATGGCTTCCCTG<br>TTATGTTGTCATGAGGCATGTGGCACAAGTGTCATTGTAGGGGTACCTCCTGATTCCCAGAACCTCTCAA<br>TAAACCCTATGCTGCTACTGACTGGACGCACGTGGAAAGGAGCTATTTTTGGAGGCTTTAAGAGTAAAGA<br>ATCTGTCCCCAAACTTGTGGCTGACTTTATGGCTAAGAAGTTTTCACTGGATGCATTAATAACAAATATT<br>TTACCTTTTGAAAAAATAAATGAAGGATTTGACCTGCTTCGCTCTGGAAAGAGTATCCGTACCATTCTGA<br>TGTTT<br><br>ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT<br>ACAAGGATGACGACGATAAGGTTTAA |



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**Protein Sequence:**

>RC215367 representing NM_000667
Red=Cloning site Green=Tags(s)

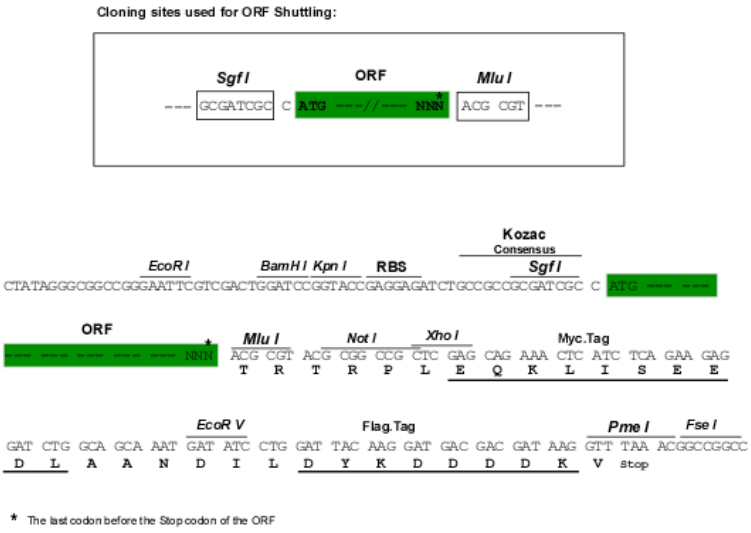
MSTAGKVIKCKAAVLWELKKPFSIEEVEVAPPKAHEVRIKMVAAGICRSDEHVVSGNLVTPLPVILGHEA
AGIVESVGEGVTTVKPGDKVIPLFTPQCGKCRICKNPESNYCLKNDLGNPRGTLQDGTRRFTCSGKPIHH
FVGVSTFSQYTVVDENAVAKIDAASPLEKVCLIGCGFSTGYGSAVKVAKVTPGSTCAVFGLGGVGLSVVM
GCKAAGAARIIAVDINKDKFAKAKELGATECINPQDYKKPIQEVLKEMTDGGVDFSFEVIGRLDTMMASL
LCCHEACGTSVIVGVPPDSQNLSINPMLLLTGRTWKGAIFGGFKSKESVPKLVADFMAKKFSLDALITNI
LPFEKINEGFDLLRSGKSIRTILMF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Chromatograms:** https://cdn.origene.com/chromatograms/mk6046_b12.zip

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**




**ACCN:** NM_000667

**ORF Size:** 1125 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).

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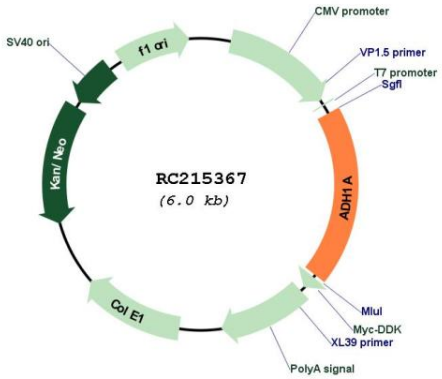
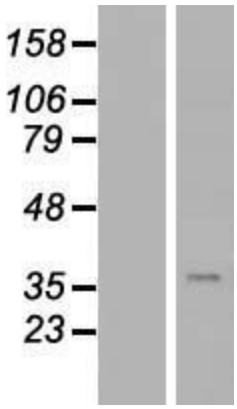
|---|---|
| **Reconstitution Method:** | 1. Centrifuge at 5,000xg for 5min.<br>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.<br>3. Close the tube and incubate for 10 minutes at room temperature.<br>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.<br>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 Size:** | 1456 bp |
| **RefSeq ORF:** | 1128 bp |
| **Locus ID:** | 124 |
| **UniProt ID:** | P07327 |
| **Cytogenetics:** | 4q23 |
| **Domains:** | ADH_zinc_N |
| **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:** | 39.7 kDa |
| **Gene Summary:** | This gene encodes a member of the alcohol dehydrogenase family. The encoded protein is the alpha subunit of class I alcohol dehydrogenase, which consists of several homo- and heterodimers of alpha, beta and gamma subunits. Alcohol dehydrogenases catalyze the oxidation of alcohols to aldehydes. This gene is active in the liver in early fetal life but only weakly active in adult liver. This gene is found in a cluster with six additional alcohol dehydrogenase genes, including those encoding the beta and gamma subunits, on the long arm of chromosome 4. Mutations in this gene may contribute to variation in certain personality traits and substance dependence. [provided by RefSeq, Nov 2010] |

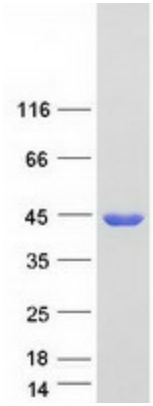
## Product images:




Circular map for RC215367




Western blot validation of overexpression lysate (Cat# [LY424579]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC215367 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).




Coomassie blue staining of purified ADH1A protein (Cat# [TP315367]). The protein was produced from HEK293T cells transfected with ADH1A cDNA clone (Cat# RC215367) using MegaTran 2.0 (Cat# [TT210002]).