

Product datasheet for **RC209616**

ADH1C (NM_000669) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ADH1C (NM_000669) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ADH1C
Synonyms:	ADH3
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)
ORF Nucleotide Sequence:	>RC209616 ORF sequence Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGAGCACAGCAGGAAAAGTAATCAAATGCAAAGCAGCTGTGCTATGGGAGTTAAAGAAACCCCTTTTCCA
TTGAGGAGGTAGAGGTTGCACCTCCTAAGGCTCATGAAGTTCGCATTAAGATGGTGGCTGCAGGAATCTG
TCGTTTCAGATGAGCATGTGGTTAGTGGCAACCTGGTGACCCCTTCTGTGATTTTAGGCCATGAGGCA
GCCGGCATCGTGGAAAGTGTGGAGAAGGGGTACTACAGTCAAACCAGGTGATAAAGTCATCCCCTCT
TTACTCCTCAGTGTGAAAATGCAGAATTTGAAAAACCCAGAAAGCAACTACTGCTTAAAAATGATCT
AGGCAATCCTCGGGGACCTGCAGGATGGCACCAGGAGGTTACCTGCAGCGGGAAGCCATCCACCAC
TTCGTCGGCGTCAGCACCTTCTCCAGTACACAGTGGTGGATGAGAATGCAGTAGCCAAAATGATGCAG
CCTCGCCCTGGAGAAAGTCTGCCTCATTGGCTGTGGATTTTCGACTGGTTATGGGTCTGCAGTCAAAGT
TGCCAAGGTACCCCAGGGTCTACCTGTGCTGTGTTTGGCCTGGGAGGGTTCGGCCTATCTGTTGTTATG
GGCTGTAAGCAGCTGGAGCAGCCAGAATCATTGCTGTGGACATCAACAAGGACAAATTTGCAAAGGCTA
AAGAGTTGGGTGCCACTGAATGCATCAACCCTCAAGACTACAAGAAACCCATTGAGGAAGTGCTAAAGGA
AATGACTGATGGAGGTGTGGATTTTTCGTTTGAAGTCATCGGTCAGCTTGACACCATGATGGCTTCCCTG
TTATGTTGTCATGAGGCATGTGGCACAAGTGTGATTGTAGGGGTACCTCCTGATCCCAGAACCTCTCAA
TAAACCCTATGCTGCTACTGACTGGACGACGTGGAAAGGAGCTATTTTGGAGGCTTAAAGAGTAAAGA
ATCTGTCCCAAACCTTGTGGCTGACTTTATGGCTAAGAAGTTTTCACTGGATGCATTAATAACAATGTT
TTACCTTTGAAAAATAAATGAAGATTTGACCTGCTTCGCTCTGGAAAGAGTATCCGTACCGTCTCTGA
CGTTT

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA



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Protein Sequence: >RC209616 protein sequence
Red=Cloning site Green=Tags(s)

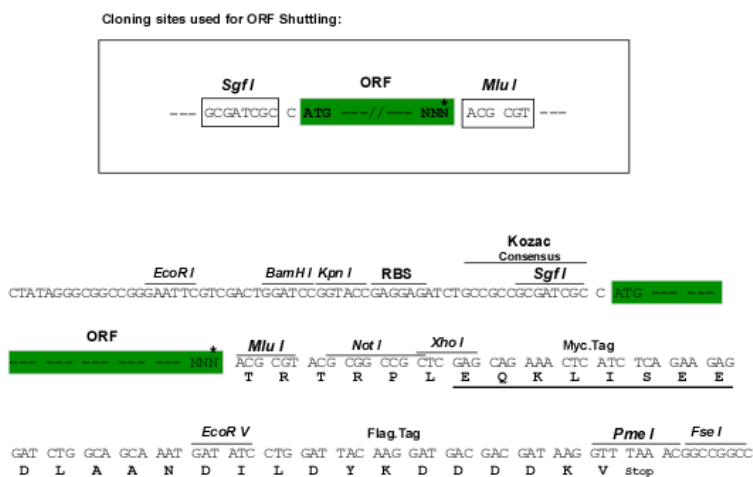
MSTAGKVIKCKAAVLWELKPPFSIEEVEVAPPKAHEVRIKMVAAGICRSDEHVVSIGNLVTPLPVILGHEA
 AGIVESVSGEVTTVKPGDKVIPLFTPQCCKRICKNPESNYCLKNDLGNPRGTLQDTRRFCSGKPIHH
 FVGSTFSQYTVVDENAVAKIDAASPLEKVCLIGCGFSTGYGSVAVKAVKVPSTCAVFLGGVGLSVVM
 GKCAAGAARIIVAVDINKDKFAKAKELGATECINPQDYKKPIQEVLKEMTDGGVDFSEVIGQLDTMMASL
 LCCEACGTSVIVGVPPDSQNL SINPMLLLTGRTWKGAIFGGFKSKEVSPKLVADFMAKKFLDALITNV
 LPFEKINEGFDLLRSGKSIRTVLTTF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6586_f06.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



* The last codon before the Stop codon of the ORF

ACCN: NM_000669

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).

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_000669.5](#)

RefSeq Size: 1769 bp

RefSeq ORF: 1128 bp

Locus ID: 126

UniProt ID: [P00326](#)

Cytogenetics: 4q23

Domains: ADH_zinc_N

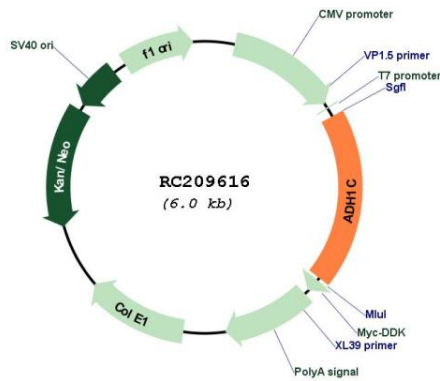
Protein Families: Druggable Genome

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

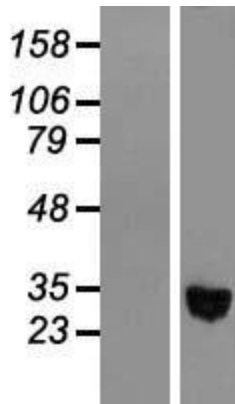
MW: 39.8 kDa

Gene Summary: This gene encodes class I alcohol dehydrogenase, gamma subunit, which is a member of the alcohol dehydrogenase family. Members of this enzyme family metabolize a wide variety of substrates, including ethanol, retinol, other aliphatic alcohols, hydroxysteroids, and lipid peroxidation products. Class I alcohol dehydrogenase, consisting of several homo- and heterodimers of alpha, beta, and gamma subunits, exhibits high activity for ethanol oxidation to acetaldehyde, thus playing a major role in ethanol catabolism. Three genes encoding alpha, beta and gamma subunits are tandemly organized in a genomic segment as a gene cluster. An association between ADH1C polymorphism and alcohol dependence has not been established. [provided by RefSeq, Sep 2019]

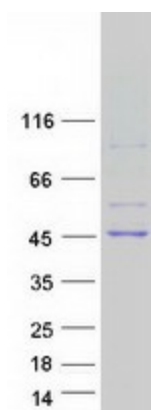
Product images:



Circular map for RC209616



Western blot validation of overexpression lysate (Cat# [LY424581]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC209616 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ADH1C protein (Cat# [TP309616]). The protein was produced from HEK293T cells transfected with ADH1C cDNA clone (Cat# RC209616) using MegaTran 2.0 (Cat# [TT210002]).