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Product datasheet for RC205391

ADH1B (NM_000668) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ADH1B (NM_000668) Human Tagged ORF Clone
Tag:	Myc-DDK
Symbol:	ADH1B
Synonyms:	ADH2; HEL-S-117
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)

ORF Nucleotide Sequence:

>RC205391 ORF sequence
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCCGCGATCGCC

ATGAGCACAGCAGGAAAAGTAATCAAATGCAAAGCAGCTGTGCTATGGGAGGTAAAGAAACCCTTTTCCA
TTGAGGATGTGGAGGTTGCACCTCCTAAGGCTTATGAAGTTCGCATTAAGATGGTGGCTGTAGGAATCTG
TCGCACAGATGACCACGTGGTTAGTGGCAACCTGGTGACCCCCCTTCCTGTGATTTTAGGCCATGAGGCA
GCCGGCATCGTGGAGAGTGTTGGAGAAGGGGTGACTACAGTCAAACCAGGTGATAAAGTCATCCCGCTCT
TTACTCCTCAGTGTGGAAAATGCAGAGTTTGTAAAAACCCGGAGAGCAACTACTGCTTGAAAAATGATCT
AGGCAATCCTCGGGGGACCCTGCAGGATGGCACCAGGAGGTTCACCTGCAGGGGGAAGCCCATTCACCAC
TTCCTTGGCACCAGCACCTTCTCCCAGTACACGGTGGTGGATGAGAATGCAGTGGCCAAAATTGATGCAG
CCTCGCCCCTGGAGAAAGTCTGCCTCATTGGCTGTGGATTCTCGACTGGTTATGGGTCTGCAGTTAACGT
TGCCAAGGTCACCCCAGGCTCTACCTGTGCTGTGTTTGGCCTGGGAGGGGTCGGCCTATCTGCTGTTATG
GGCTGTAAAGCAGCTGGAGCAGCCAGAATCATTGCTGTGGACATCAACAAGGACAAATTTGCAAAGGCCA
AAGAGTTGGGTGCCACTGAATGCATCAACCCTCAAGACTACAAGAAACCCATCCAGGAAGTGCTAAAGGA
AATGACTGATGGAGGTGTGGATTTTTCGTTTGAAGTCATCGGTCGGCTTGACACCATGATGGCTTCCCTG
TTATGTTGTCATGAGGCATGTGGCACAAGCGTCATCGTAGGGGTACCTCCTGCTTCCCAGAACCTCTCAA
TAAACCCTATGCTGCTACTGACTGGACGCACCTGGAAGGGGGCTGTTTATGGTGGCTTTAAGAGTAAAGA
AGGTATCCCAAAACTTGTGGCTGATTTTATGGCTAAGAAGTTTTCACTGGATGCGTTAATAACCCATGTT
TTACCTTTTGAAAAAATAAATGAAGGATTTGACCTGCTTCACTCTGGGAAAAGTATCCGTACCGTCCTGA
CGTTT

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
ACAAGGATGACGACGATAAGGTTTAA

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Protein Sequence:

>RC205391 protein sequence
Red=Cloning site Green=Tags(s)

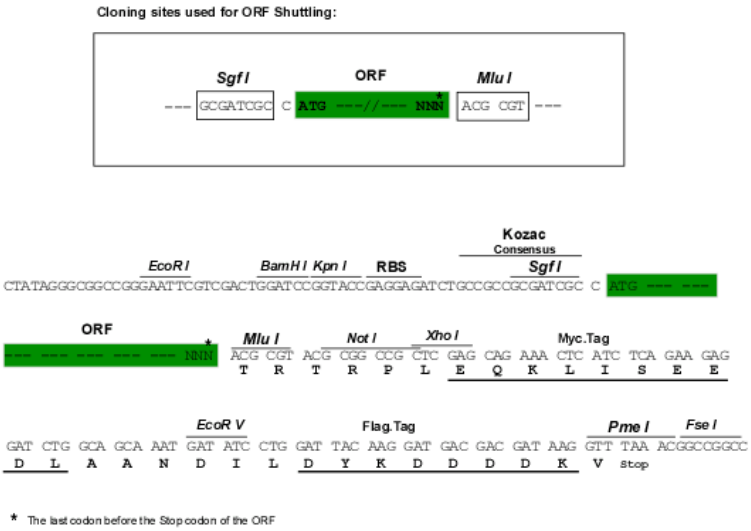
MSTAGKVIKCKAAVLWEVKKPFSIEDVEVAPPKAYEVRIKMVAVGICRTDDHVVSGNLVTPLPVILGHEA
AGIVESVGEGVTTVKPGDKVIPLFTPQCGKCRVCKNPESNYCLKNDLGNPRGTLQDGTRRFTCRGKPIHH
FLGTSTFSQYTVVDENAVAKIDAASPLEKVCLIGCGFSTGYGSAVNVAKVTPGSTCAVFGLGGVGLSAVM
GCKAAGAARIIAVDINKDKFAKAKELGATECINPQDYKKPIQEVLKEMTDGGVDFSFEVIGRLDTMMASL
LCCHEACGTSVIVGVPPASQNLSINPMLLLTGRTWKGAVYGGFKSKEGIPKLVADFMAKKFSLDALITHV
LPFEKINEGFDLLHSGKSIRTVLTF

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

Chromatograms: https://cdn.origene.com/chromatograms/mk6315_d10.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000668

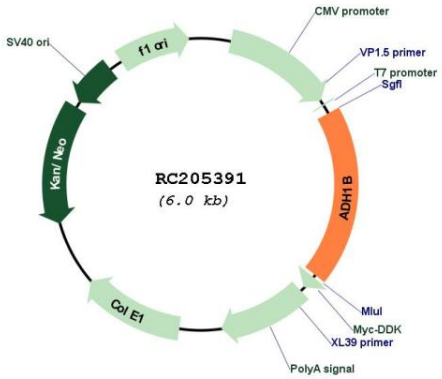
ORF Size: 1125 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

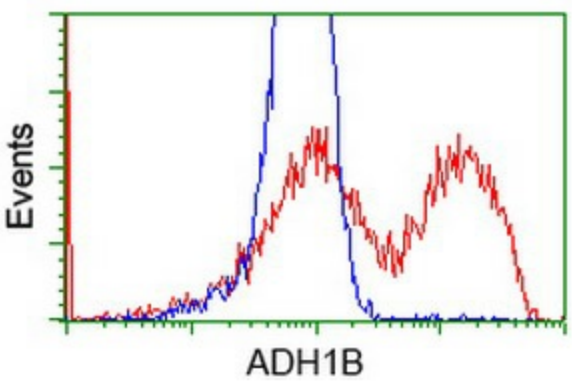
The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in 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.
Note:	Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.
RefSeq:	NM_000668.6, BC033009.2
RefSeq Size:	2707 bp
RefSeq ORF:	1128 bp
Locus ID:	125
UniProt ID:	P00325
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:	39.9 kDa
Gene Summary:	The protein encoded by this gene 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. This encoded protein, consisting of several homo- and heterodimers of alpha, beta, and gamma subunits, exhibits high activity for ethanol oxidation and plays 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. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Nov 2013]

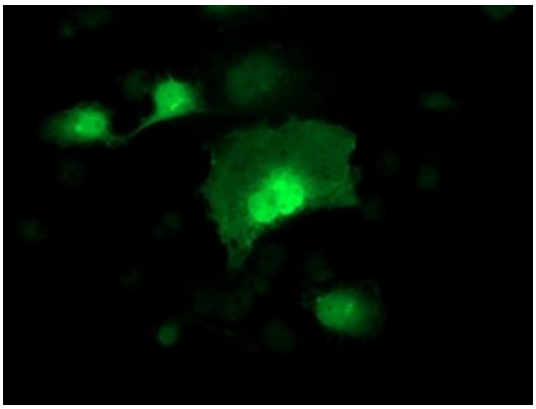
Product images:



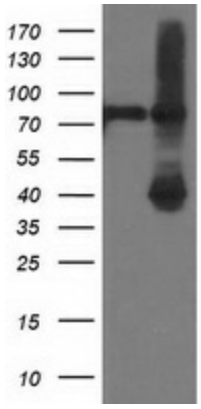
Circular map for RC205391



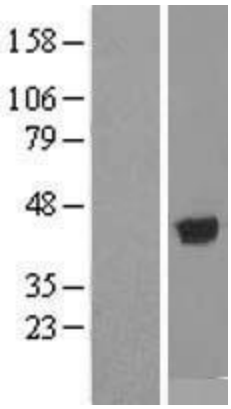
HEK293T cells transfected with either RC205391 overexpress plasmid (Red) or empty vector control plasmid (Blue) were immunostained by anti-ADH1B antibody ([TA502777]), and then analyzed by flow cytometry.



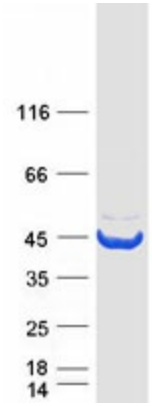
Anti-ADH1B mouse monoclonal antibody ([TA502777]) immunofluorescent staining of COS7 cells transiently transfected by pCMV6-ENTRY ADH1B (RC205391).



HEK293T cells were transfected with the pCMV6-ENTRY control (Cat# [PS100001], Left lane) or pCMV6-ENTRY ADH1B (Cat# RC205391, 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-ADH1B (Cat# [TA502777]). Positive lysates [LY424580] (100ug) and [LC424580] (20ug) can be purchased separately from OriGene.



Western blot validation of overexpression lysate (Cat# [LY424580]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from un-transfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC205391 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).



Coomassie blue staining of purified ADH1B protein (Cat# [TP305391]). The protein was produced from HEK293T cells transfected with ADH1B cDNA clone (Cat# RC205391) using MegaTran 2.0 (Cat# [TT210002]).