

Product datasheet for **RG204903**

ADH5 (NM_000671) Human Tagged ORF Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	ADH5 (NM_000671) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	ADH5
Synonyms:	ADH-3; ADHX; AMEDS; BMFS7; FALDH; FDH; GSH-FDH; GSNOR; HEL-S-60p
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)
ORF Nucleotide Sequence:	>RG204903 representing NM_000671 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
GCC**CGATCGCC**

ATGGCGAACGAGGTTATCAAGTGAAGGCTGCAGTTGCTGGGAGGCTGGAAAGCCTCTCTCCATAGAGG
AGATAGAGGTGGCACCCCAAAGGCTCATGAAGTTCGAATCAAGATCATTGCCACTGCGGTTTGCCACAC
CGATGCCTATACCCTGAGTGGAGCTGATCCTGAGGTTGTTTTCCAGTGATCTTGGGACATGAAGGTGCT
GGAATTGTGAAAGTGTGGTGAGGGAGTTACTAAGCTGAAGGCGGGTGACTGTATCCCACTTTACA
TCCCACAGTGTGGAGAATGCAAATTTGTCTAAATCCTAAAACCTTTGCCAGAAGATAAGAGTCAC
TCAAGGGAAAGGATTAATGCCAGATGGTACCAGCAGATTTACTTGCAAAGGAAAGACAATTTGCATTAC
ATGGGAACCAGCACATTTTCTGAATACACAGTTGTGGCTGATATCTCTGTTGCTAAAATAGATCCTTTAG
CACCTTTGGATAAAGTCTGCCTTCTAGGTTGTGGCATTCAACCGGTTATGGTGTGCTGTGAACACTGC
CAAGTTGGAGCCTGGCTCTGTTTGTGCCGTCCTTGGTCTGGGAGGAGTCGGATTGGCAGTTATCATGGGC
TGTAAGTGGCTGGTCTCCCGGATCATTGGTGTGGACATCAATAAAGATAAATTTGCAAGGGCCAAAG
AGTTTGGAGCCACTGAATGTATTAACCCCTCAGGATTTAGTAAACCCATCCAGGAAGTGCCTATTGAGAT
GACCGATGGAGGAGTGGACTATTCCTTTGAATGTATTGGTAATGTGAAGGTGATGAGAGCAGCAGCTTGAG
GCATGTCAAGGGCTGGGCGTCAGCGTCGTTGGAGTAGCTGCTTCAGGTGAAGAAATGGCACTC
GTCCATTCAGCTGGTAAACAGGTCGCACATGGAAAGGCACTGCCTTTGGAGGATGGAAGAGGTAGAAAG
TGTCCTCAAGTGGTGTCTGAATATATGTCCAAAAGATAAAAAGTTGATGAATTTGTGACTCACAATCTG
TCTTTTGTGAAATCAACAAAGCCTTTGAACTGATGCATTCTGGAAGAGCATTGAACTGTTGTAAGA
TT

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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Protein Sequence: >RG204903 representing NM_000671
Red=Cloning site Green=Tags(s)

MANEVIKCKAAVAWEAGKPLSIEEIEVAPPKAHEVRIKIIATAVCHTDAYTL SGADPEGCFPVILGHEGA
 GIVESVGEVTKLKAGDVIPL YIPQCGECKFLNPKTNLCQKIRVTQGKGLMPDGT SRFTCKGKTI LHY
 MGTSTFSEYTVVADISVAKIDPLAPLDKVCLLGCGISTGYGAAVNTAKLEPGSVCAVFLGGVGLAVIMG
 CKVAGASRIIGVDINKDKFARAKEFGATECINPQDFSKPIQEVL IEMTDGGVDYSFECIGNVKVMRAALE
 ACHKGWGVSVVGVVAASGEEIATRPFLVTGRTWKGTAFGGWKSVESVPKLVSEYMSKKIKYDEFVTHNL
 SFDEINKAFELMHSKSI RTVVKI

TRTRPLE - GFP Tag - V

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_000671

ORF Size: 1122 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_000671.4](#)

RefSeq Size: 2644 bp

RefSeq ORF: 1125 bp

Locus ID: 128

UniProt ID: [P11766](#)

Cytogenetics: 4q23

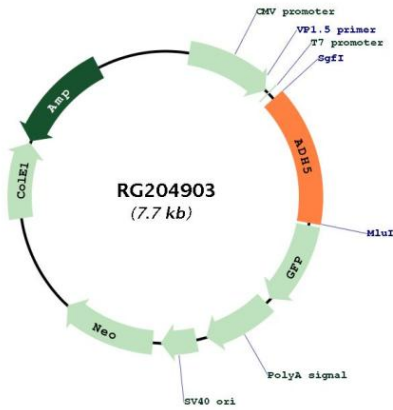
Domains: ADH_zinc_N

Protein Families: Druggable Genome

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

Gene Summary: This gene encodes 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 encoded protein forms a homodimer. It has virtually no activity for ethanol oxidation, but exhibits high activity for oxidation of long-chain primary alcohols and for oxidation of S-hydroxymethyl-glutathione, a spontaneous adduct between formaldehyde and glutathione. This enzyme is an important component of cellular metabolism for the elimination of formaldehyde, a potent irritant and sensitizing agent that causes lacrymation, rhinitis, pharyngitis, and contact dermatitis. The human genome contains several non-transcribed pseudogenes related to this gene. [provided by RefSeq, Oct 2008]

Product images:



Circular map for RG204903