

## Product datasheet for **RG204750**

### ADH4 (NM\_000670) Human Tagged ORF Clone

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** ADH4 (NM\_000670) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** ADH4  
**Synonyms:** ADH-2; HEL-S-4  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG204750 representing NM\_000670  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
GCC**CGATCGCC**

ATGGGCACCAAGGGCAAAGTTATTAATGCAAAGCAGCCATCGCCTGGGAAGCAGGCAAGCCCCTTTGCA  
TTGAAGAGGTTGAAGTAGCTCCCCCAAGGCTCATGAAGTTCGCATTGATCATTGCTACCTCCCTGTG  
CCATACTGATGCCACTGTTATCGATTCTAAATTTGAGGGCCTAGCTTTCCAGTGATCGTTGGCCATGAG  
GCTGCAGGTATTGTGAAAGTATTGGGCCAGGAGTGACCAACGTCAAACCAGGTGACAAAGTAATCCAC  
TTTATGCACCTCTATGTAGAAAATGCAAGTTTTGTCTGAGTCCACTCACAAATTTGTGTGGAAAATCAG  
TAATCTCAAAAGTCCTGCTAGTGATCAACAACATGGAAGACAAAACCAGCAGGTTTACCTGCAAAGGA  
AAACCAGTTTACCATTTCTTTGGAACCAGTACATTCTCTCAGTACACTGTGGTGTGAGATATCAATCTTG  
CCAAAATAGATGATGATGCAAAATTTAGAGAGAGTTTGTCTGCTTGGATGTGGGTTTTCAACTGGCTATGG  
GGCTGCAATCAACAATGCCAAGGTCACCCTGGTTCGACTTGTGCTGCTTTGGCCTAGGAGGTGTGGGT  
CTTTCTGCTGTAATGGGTTGTAAGCAGCAGGAGCTTCCAGAATCATAGGTATTGACATCAACAGTGAGA  
AGTTTGTGAAGGCTAAAGCCCTGGGAGCCACTGACTGCCTCAATCCTAGAGACTTACATAAACCTATCCA  
GGAAGTTATCATTGAATTGACCAAGGGAGGTGTGGATTTTGCCTTGACTGTGCAGGTGGATCTGAAACC  
ATGAAAGCAGCCCTGGACTGTACAACCGCAGGCTGGGGATCATGTACTTTCATTGGAGTAGCTGCTGGTA  
GCAAAGGATTGACTGTTTTTCCAGAGGAGCTAATAATCGCCGTAATAAATGGAACATTCTTTGGTGG  
TTGAAAAGTGTAGATTCTATCCAAAGCTGGTCACTGACTATAAGAATAAGAAATTCATCTGGATGCA  
CTGGTGACCCATACCCTGCCTTTTGACAAAATCAGTGAGGCATTTGACCTAATGAACCAAGGAAAAAGCA  
TCCGAACAATCCTCATCTTT

AC**CGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG204750 representing NM\_000670  
 Red=Cloning site Green=Tags(s)

MGTKGKVIKCKAAIWEAGKPLCIEEVEVAPPKAHEVRIQIIATSLCHTDATVIDSKFEGLAFPVIVGHE  
 AAGIVESIGPGVTNVKPGDKVIPLYAPLCRKCKFCLSPLTNLCKGISNLKSPASDQQLMEDKTSRFTCKG  
 KPVYHFFGTSTFSQYTVVSDINLAKIDDDANLERVCLLGCGFSTGYGAAINNAKVTPGSTCAVFLGGVG  
 LSAVMGCKAAGASRIIGIDINSEKFKAKALGATDCLNPRDLHKPIQEVI IELTKGGVDFALDCAGGSET  
 MKAALDCTTAGWGSCTFIGVAAGSKGLTVFPEELIIGRTINGTFFGGWKSVD SIPKLVTDYKNNKFNLDA  
 LVHTLPLFDKISEAFDLMNQGSIRTIILIF

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_000670

**ORF Size:** 1140 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\\_000670.3](#), [NP\\_000661.2](#)

**RefSeq Size:** 1980 bp

**RefSeq ORF:** 1143 bp

**Locus ID:** 127

**UniProt ID:** [P08319](#)

**Cytogenetics:** 4q23

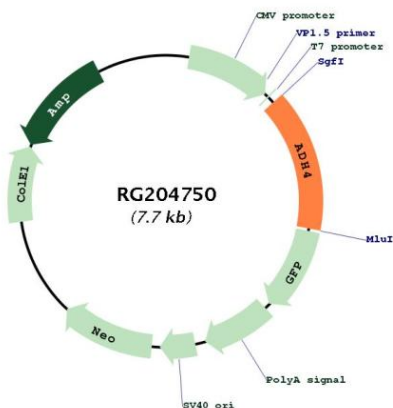
**Domains:** ADH\_zinc\_N

**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

**Gene Summary:** This gene encodes class II alcohol dehydrogenase 4 pi 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 II alcohol dehydrogenase is a homodimer composed of 2 pi subunits. It exhibits a high activity for oxidation of long-chain aliphatic alcohols and aromatic alcohols and is less sensitive to pyrazole. This gene is localized to chromosome 4 in the cluster of alcohol dehydrogenase genes. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RG204750