

## Product datasheet for **RG208980**

### **RDH10 (NM\_172037) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** RDH10 (NM\_172037) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** RDH10  
**Synonyms:** SDR16C4  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG208980 representing NM\_172037  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGAACATCGTGGTGGAGTTCTTCGTGGTCACTTTCAAAGTGCTCTGGCGTTCGTGCTGGCCGCGGCGC  
 GCTGGCTGGTGCGCCCAAGGAGAAGAGCGTGGCGGCCAGGTGTGCCTCATCACCGCGCCGCGAGCGG  
 CCTGGGCCGCTTTCGCGCTGGAGTTCGCCCGCGTGGCGCTGCTGGTGTGTGGGACATCAACACG  
 CAAAGCAACGAGGAGACGGCTGGCATGGTGCACCACATCTACCGGACCTGGAGGCGCCGACGCCGCTG  
 CGCTGCAAGCTGGGAATGGTGGGAAGAAATTCTGCCCCACTGTAACCTGCAGGTTTTTACCTACACCTG  
 TGACGTGGGAAGAGGAGAACGTCTACCTGACGGCTGAAAGAGTCCGCAAGGAGTTGGCGAAGTCTCA  
 GTCCCTGGTCAATAATGCTGGTGTGGTCTCTGGGCATCACCTTCTGGAATGCTGATGAGCTCATTGAGA  
 GAACCATGATGGTCAATTGCCATGCACACTTCTGGACCACTAAGGCTTTTCTTCTACGATGCTGGAGAT  
 TAATCATGGTCATATTGTGACAGTTGCAAGTTCCTTGGGATTGTTTCAGTACTGCCGGAGTTGAGGATTAC  
 TGTGCCAGTAAATTTGGAGTTGTGGTTTTTCATGAATCCCTGAGCCATGAACTAAAGGCTGCTGAAAAGG  
 ATGGAATTAACAACCTTGGTTTGGCCCTTATCTGTAGACACTGGCATGTTTCAGAGGCTGCCGAATCAG  
 GAAAGAAATTGAGCCTTTCTGCCACCTCTGAAGCCTGATTACTGTGTGAAGCAGGCCATGAAGGCCATC  
 CTCACTGACCAGCCCATGATCTGCACTCCCCGCTCATGTACATCGTGACCTTTCATGAAGAGCATCCTAC  
 CATTTGAAGCAGTTGTGTCATGTATCGGTTCTAGGAGCGGACAAGTGTATGTACCCCTTTATTGCTCA  
 AAGAAAGCAAGCCACAAACAATAATGAAGCAAAAATGGAATC

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA



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**Protein Sequence:** >RG208980 representing NM\_172037  
 Red=Cloning site Green=Tags(s)

MNIVVEFFVVTFKVLWAFVLAARWLVRPKEKSVAGQVCLITGAGSGLGRLFALEFARRRALLVLWDINT  
 QSNEETAGMVRHIYRDLEAADAALQAGNGEEEILPHCNLQVFTYCDVGKRENVYLTAEVRKEVGEVS  
 VLVNAGVVS GHLLLECPDELIERTMMVNCHAHFWTTKAF LPTMLEINHGHIVTVASSLGLFSTAGVEDY  
 CASKFGVVGFHESLSHELKAAEKDGIKTTLVCPYLVDTMFRGCRIRKEIEPFLPPLKPDYCVKQAMKAI  
 LTDQPMICTPRLMYIVTFMKSILPFEAVVCMYRFLGADKCMYPFIAQRKQATNNNEAKNGI

TRTRPLE - GFP Tag - V

**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**



**ACCN:** NM\_172037

**ORF Size:** 1023 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\\_172037.5](#)

**RefSeq Size:** 2751 bp

**RefSeq ORF:** 1026 bp

**Locus ID:** 157506

**UniProt ID:** [Q8IZV5](#)

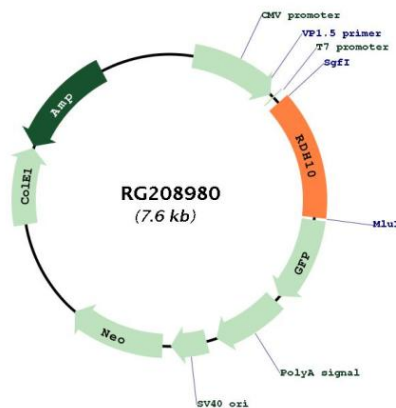
**Cytogenetics:** 8q21.11

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Metabolic pathways, Retinol metabolism

**Gene Summary:** This gene encodes a retinol dehydrogenase, which converts all-trans-retinol to all-trans-retinal, with preference for NADP as a cofactor. Studies in mice suggest that this protein is essential for synthesis of embryonic retinoic acid and is required for limb, craniofacial, and organ development. [provided by RefSeq, Dec 2011]

### Product images:



Circular map for RG208980