

## Product datasheet for **RG229816**

### **CYB5R3 (NM\_001171661) Human Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** CYB5R3 (NM\_001171661) Human Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** CYB5R3  
**Synonyms:** B5R; DIA1  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >RG229816 representing NM\_001171661  
Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCCCGCATCGCC

ATGGGGGCCAGCTCAGCACGTTGGGCCATATGGTGCTCTTCCCAGTCTGGTTCCTGTACAGTCTGCTCA  
 TGAAGCTGTTCCAGCGCTCCACGCCAGCCATCACCTCGAGAGCCCGGACATCAAGTACCCGCTGCGGCT  
 CATCGACCGGGAGATCATCAGCCATGACACCCGGCGCTCCGCTTTGCCCTGCCGTACCCAGCACATC  
 CTGGGCTCCCTGTCGGCCAGCACATCTACCTCTCGGCTCGAATTGATGAAAACCTGGTCGTCGGCCCT  
 ATACACCCATCTCCAGCGATGATGACAAGGGCTTCGTGGACCTGGTCATCAAGGTTTACTTCAAGGACAC  
 CCATCCCAAGTTTCCCGCTGGAGGGAAGATGTCTCAGTACCTGGAGAGCATGCAGATTGGAGACACCATT  
 GAGTTCGGGGGCCAGTGGGCTGCTGGTCTACCAGGGCAAAGGGAAGTTCGCCATCCGACCTGACAAAA  
 AGTCCAACCTATCATCAGGACAGTGAAGTCTGTGGGCATGATCGCGGGAGGGACAGGCATCACCCCGAT  
 GCTGCAGGTGATCCGCGCCATCATGAAGGACCCTGATGACCACACTGTGTGCCACCTGCTCTTTGCCAAC  
 CAGACCGAGAAGGACATCCTGCTGCGACCTGAGCTGGAGGAACTCAGGAACAAACATTCTGCACGCTTCA  
 AGCTCTGGTACACGCTGGACAGAGCCCTGAAGCCTGGGACTACGGCCAGGGCTTCGTGAATGAGGAGAT  
 GATCCGGGACCACCTTCCACCCAGAGGAGGACCGCTGGTGTGATGTGTGGCCCCCACCATGATC  
 CAGTACGCCTGCCTTCCCAACCTGGACCAGTGGGCCACCCACGGAGCGCTGCTTCGTCTTC

ACGCGTACGCGGCCGCTCGAG - GFP Tag - GTTTAA



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**Protein Sequence:** >RG229816 representing NM\_001171661  
 Red=Cloning site Green=Tags(s)

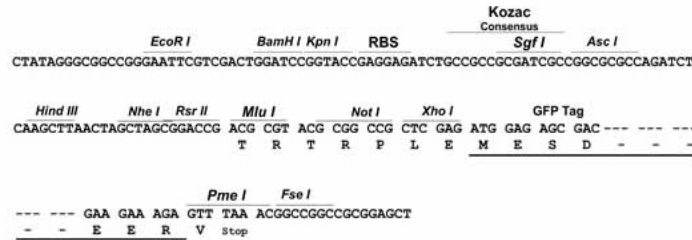
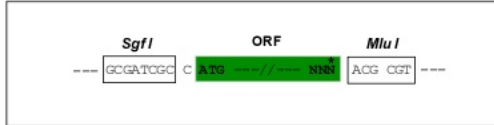
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 LGLPVGQHIYLSARIDGNLVVRPYTPISSDDDKGFVDLVIKVFYKDHKFPAGGKMSQYLESMQIGDTI  
 EFRGPGSLLVYQKGKFAIRPDKKSNIIRTVKSVGMIAAGGTGITPMLQVIRAIMKDPDDHTVCHLLFAN  
 QTEKDILLRPELEELRNKHSARFKLWYTLDRAPEAWDYGQGFVNEEMIRDHLPPPEEEPLVLMCGPPPMI  
 QYACLPLNDHVGHPTRCFVF

TRTRPLE - GFP Tag - V

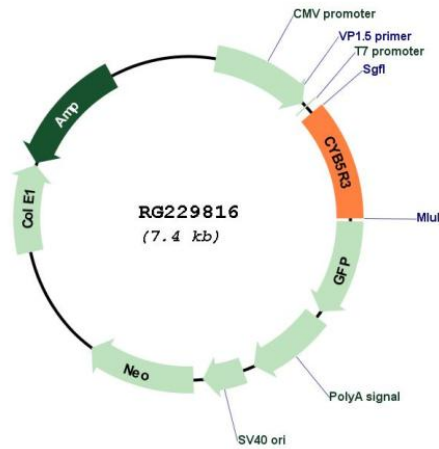
**Restriction Sites:** SgfI-MluI

**Cloning Scheme:**

Cloning sites used for ORF Shuttling:



**Plasmid Map:**



**ACCN:** NM\_001171661

**ORF Size:** 906 bp

<b>OTI Disclaimer:</b>	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. <a href="#">More info</a>
<b>OTI Annotation:</b>	This clone was engineered to express the complete ORF with an expression tag. Expression varies depending on the nature of the gene.
<b>Components:</b>	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).
<b>Reconstitution Method:</b>	<ol style="list-style-type: none"><li>1. Centrifuge at 5,000xg for 5min.</li><li>2. Carefully open the tube and add 100ul of sterile water to dissolve the DNA.</li><li>3. Close the tube and incubate for 10 minutes at room temperature.</li><li>4. Briefly vortex the tube and then do a quick spin (less than 5000xg) to concentrate the liquid at the bottom.</li><li>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.</li></ol>
<b>RefSeq:</b>	<a href="#">NM_001171661.1</a> , <a href="#">NP_001165132.1</a>
<b>RefSeq Size:</b>	2983 bp
<b>RefSeq ORF:</b>	837 bp
<b>Locus ID:</b>	1727
<b>UniProt ID:</b>	<a href="#">P00387</a>
<b>Cytogenetics:</b>	22q13.2
<b>Protein Families:</b>	Druggable Genome
<b>Protein Pathways:</b>	Amino sugar and nucleotide sugar metabolism
<b>Gene Summary:</b>	This gene encodes cytochrome b5 reductase, which includes a membrane-bound form in somatic cells (anchored in the endoplasmic reticulum, mitochondrial and other membranes) and a soluble form in erythrocytes. The membrane-bound form exists mainly on the cytoplasmic side of the endoplasmic reticulum and functions in desaturation and elongation of fatty acids, in cholesterol biosynthesis, and in drug metabolism. The erythrocyte form is located in a soluble fraction of circulating erythrocytes and is involved in methemoglobin reduction. The membrane-bound form has both membrane-binding and catalytic domains, while the soluble form has only the catalytic domain. Alternate splicing results in multiple transcript variants. Mutations in this gene cause methemoglobinemias. [provided by RefSeq, Jan 2010]