

## Product datasheet for **RG207544**

### **CYBB (NM\_000397) Human Tagged ORF Clone**

#### **Product data:**

Product Type:	Expression Plasmids
Product Name:	CYBB (NM_000397) Human Tagged ORF Clone
Tag:	TurboGFP
Symbol:	CYBB
Synonyms:	AMCBX2; CGD; CGDX; GP91-1; GP91-PHOX; GP91PHOX; IMD34; NOX2; p91-PHOX
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-AC-GFP (PS100010)
E. coli Selection:	Ampicillin (100 ug/mL)



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**ORF Nucleotide Sequence:**

>RG207544 representing NM\_000397  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGGATCGCC**

ATGGGAACTGGGCTGTGAATGAGGGGCTCTCCATTTTTGTCATTCTGGTTGGCTGGGTTGAACGTCT  
 TCCTCTTTGTCTGGTATTACCGGTTTATGATATTCCACCTAAGTTCTTTTACACAAGAAAACCTCTTGG  
 GTCAGCACTGGCACTGGCCAGGGCCCTGCAGCCTGCCTGAATTTCAACTGCATGCTGATTCTCTTGCCA  
 GTCTGTCGAAATCTGCTGTCTTCTCAGGGGTTCCAGTGCCTGCTCAACAAGAGTTCAAGACAAC  
 TGGACAGGAATCTCACCTTTCAAAAAAGTGGCAGTGGATGATTGCACCTCACTCTGCGATTACACCAT  
 TGCACATCTATTAATGTGAATGGTGTGAATGCCGAGTCAATAATTCTGATCCTTATTCAGTAGCA  
 CTCTCTGAACTGGAGACAGGCAAAATGAAAGTTATCTCAATTTGCTCGAAAGAGAATAAAGAACCCTG  
 AAGGAGGCTGTACCTGGCTGTGACCCTGTTGGCAGGCATCACTGGAGTTGTCATCACGCTGTGCCTCAT  
 ATTAATTACACTTCTCCACAAAACCATCCGGAGGCTTACTTTGAAGTCTTTTGGTACACACATCAT  
 CTCTTTGTGATCTTCTTATTGGCTTGCCATCCATGGAGCTGAACGAATTGTACGTGGGACAGCCGAG  
 AGAGTTTGGCTGTGCATAATATAACAGTTTGTGAACAAAAATCTCAGAATGGGGAAAAATAAAGGAATG  
 CCCAATCCCTCAGTTTGTGAAACCCTCCTATGACTTGGAAATGGATAGTGGTCCCAGTTTCTGTAT  
 CTCTGTGAGAGTTGGTGCAGTTTGGCGATCTCAACAGAAGGTGGTCAACCAAGGTGGTCACTCACC  
 CTTTCAAACCATCGAGCTACAGATGAAGAAGAAGGGTTCAAATGGAAGTGGGACAATACATTTTTGT  
 CAAGTGCCCAAAGGTGTCCAAGCTGGAGTGGCACCCCTTTACTGACATCCGCCCTGAGGAAGACTTC  
 TTTAGTATCCATATCCGCATCGTTGGGACTGGACAGAGGGGCTGTTCAATGCTTGTGGCTGTATAAGC  
 AGGAGTTTCAAGATGCGTGGAACTACCTAAGATAGCGTTGATGGGCCCTTTGGCACTGCCAGTGAAGA  
 TGTGTTACAGTATGAGGTGGTGTGTTAGTGGGAGCAGGATTGGGGTACACCCCTTCGCATCCATTCTC  
 AAGTCAGTCTGGTACAAATATTGCAATAACGCCACCAATCTGAAGCTCAAAAAGATCTACTTCTACTGGC  
 TGTGCCGGACACACATGCCTTTGAGTGGTTTGCAGATCTGCTGCAACTGCTGGAGAGCCAGATGCAGGA  
 AAGGAACAATGCCGGCTTCTCAGCTACAACATCTACCTCACTGGCTGGGATGAGTCTCAGGCCAATCAC  
 TTTGCTGTGCACCATGATGAGGAGAAAGATGTGATCACAGGCCTGAAACAAAAGACTTTGTATGGACGGC  
 CCAACTGGGATAATGAATTCAAGACAATTGCAAGTCAACACCCTAATACCAGAATAGGAGTTTCTCTG  
 TGGACCTGAAGCCTTGGCTGAAACCCTGAGTAAACAAAGCATCTCCAACCTGAGTCTGGCCCTCGGGGA  
 TGCATTTCAATTTCAACAAGGAAAACCTC

**ACGCGT**ACGCGGCCGCTCGAG - GFP Tag - GTTTAA

**Protein Sequence:**

>RG207544 representing NM\_000397  
 Red=Cloning site Green=Tags(s)

MGNWAVNEGLSIFVILVWLGLNVFLFVWYRVDIPPKFFYTRKLLGSALALARAPAACLNFNCMLILLP  
 VCRNLLSFLRGSSACCSTRVRRQLDRNLTFHKMVAWMIALHSAIHTIAHLFNVEWCVNARVNSDPYSVA  
 LSELGDRQNESYLNFAKRIKNPEGGLYAVTLLAGITGVVITLCLILIIITSSTKIRRSYFEVFWYTHH  
 LFVIFFIGLAIHGAERIVRGQTAEVSLAVHNITVCEQKISEWGIKECPIQFAGNPPMTWKWIVGPMFLY  
 LCERLVRFWRSQQKVITKVVTHPFKTIELQMKKGFMEVGQYIFVKCPKVSKEWHPFTLTSAPEDF  
 FSIHIRIVGDWTEGLFNACGDKQEFQDAWKLPKIAVDGPFGTASEDVFSYEVVMLVGAGIGVTPFASIL  
 KSVWYKYCNNATNLKLLKIYFYWLCRDTHAFEFWADLLQLLESQMQRNAGFLSYNIYLTGWDESQLNH  
 FAVHHDEEKDVIITGLKQKTLYGRPNWDNEFKTIAHQHPNTRIGVFLCGPEALAEATLSKQSIENSESGPRG  
 VHFIFNKENF

**TRTRPLE** - GFP Tag - V

**Restriction Sites:**

SgfI-MluI

**Cloning Scheme:**


**ACCN:** NM\_000397

**ORF Size:** 1710 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\\_000397.4](#)

**RefSeq Size:** 4266 bp

**RefSeq ORF:** 1713 bp

**Locus ID:** 1536

**UniProt ID:** [P04839](#)

**Cytogenetics:** Xp21.1-p11.4

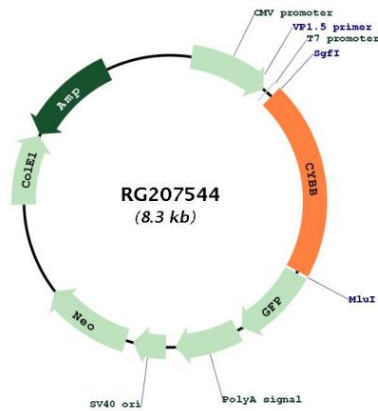
**Domains:** Ferric\_reduct

**Protein Families:** Druggable Genome, Ion Channels: Other, Transmembrane

**Protein Pathways:** Leukocyte transendothelial migration

**Gene Summary:** Cytochrome b (-245) is composed of cytochrome b alpha (CYBA) and beta (CYBB) chain. It has been proposed as a primary component of the microbicidal oxidase system of phagocytes. CYBB deficiency is one of five described biochemical defects associated with chronic granulomatous disease (CGD). In this disorder, there is decreased activity of phagocyte NADPH oxidase; neutrophils are able to phagocytize bacteria but cannot kill them in the phagocytic vacuoles. The cause of the killing defect is an inability to increase the cell's respiration and consequent failure to deliver activated oxygen into the phagocytic vacuole. [provided by RefSeq, Jul 2008]

**Product images:**



Circular map for RG207544