

## Product datasheet for **SC101113**

### **CYBA (NM\_000101) Human Untagged Clone**

#### Product data:

Product Type:	Expression Plasmids
Product Name:	CYBA (NM_000101) Human Untagged Clone
Tag:	Tag Free
Symbol:	CYBA
Synonyms:	CGD4; p22-PHOX
Mammalian Cell Selection:	None
Vector:	<u><a href="#">pCMV6-XL5</a></u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>OriGene ORF within SC101113 sequence for NM_000101 edited (data generated by NextGen Sequencing)

```
ATGGGGCAGATCGAGTGGGCCATGTGGGCAACGAGCAGGCGCTGGCGTCCGGCCTGATC
CTCATCACCGGGGCATCGTGGCCACAGCTGGGCGCTTACCCAGTGGTACTTTGGTGCC
TACTCCATTGTGGCGGGCGTGTTTGTGTGCCTGCTGGAGTACCCCGGGGAAGAGGAAG
AAGGGCTCCACCATGGAGCGCTGGGGATAGAAGCACATGACCGCCGTGGTGAAGCTGTTC
GGGCCCTTTACCAGGAATTACTATGTTTCGGGCCGTCTGCATCTCCTGCTCTCGGTGCC
GCCGGTCTCCTGCTGGCCACCATCCTTGGGACCGCCTGCCTGGCCATTGCGAGCGGCATC
TACCTACTGGCGGCTGTGCGTGGCGAGCAGTGGACGCCATCGAGCCCAAGCCCCGGAG
CGGCCGCAGATCGGAGGCACCATCAAGCAGCCGCCAGCAACCCCCGCCGGCCCCCG
GCCGAGGCCCGCAAGAAGCCCAGCGAGGAGGAGGCTGCGGTGGCGCGGGGGACCCCCG
GGAGGTCCCCAGGTCAACCCCATCCCGGTGACCGACGAGGTCGTGTGA
```

Clone variation with respect to NM\_000101.2  
36 a=>g;208 c=>t;214 t=>c



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**5' Read Nucleotide Sequence:**

>OriGene 5' read for NM\_000101 unedited  
 GGTCAAAATTTGTAAACGACTCATATAGGCGGCCGCGNAATTCGCACGAGGCAGTGTCCC  
 AGCCGGGTTTCGTGTCGCCTGGGGCAGATCGAGTGGGCCATGTGGGCCAACGAGCAGGCGC  
 TGGCGTCCGGCCTGATCCTCATCACCGGGGCATCGTGGCCACAGCTGGGCGTTACCC  
 AGTGGTACTTTGGTGCCTACTCCATTGTGGCGGGCGTGTGGTGTGCCTGCTGGAGTACC  
 CCCGGGGGAAGAGGAAGAAGGGCTCCACCATGGAGCGCTGGGGATAGAAGCACATGACCG  
 CCGTGGTGAAGCTGTTCCGGGCCCTTACCAGGAATTAATAATGTTCCGGGCCGCTGCATC  
 TCCTGCTCTCGGTGCCCGCGGCTTCTGCTGGCCACCATCCTTGGGACCGCCTGCCTGG  
 CCATTGCGAGCGGCATCTACCTACTGGCGGCTGTGCGTGGCGAGCAGTGGACGCCATCG  
 AGCCCAAGCCCCGGGAGCGGCCGAGATCGGAGGCACCATCAAGCAGCCGCCAGCAACC  
 CCCC GCCCGGCCCGGCCGAGGCCCGCAAGAAGCCAGCGAGGAGGAAGCTGCGGTGG  
 CGGCNCGGGGGGACCCCGGAGGTCCCCAGGTCAACCCCATCCCGGTGACCGACGAGGT  
 CGTGTGACCTCGNCCGNACCTGCCCTCCGCCAGGGTGCACCACCTGCAATAATGCAGCG  
 AAGCCGNNAAAAANNNAAAAANNNNNAAAAANNNNNNNNNNNNNNNNNNNNNNNNNNNNN  
 CTAGATTGCGGCCGGGTATAGCTGTTTCTGAACAGATCCCGGGTGGCATTCTGTGAC  
 CCTCCCCATGGCTTCTCTGGCCCTGGAAGTTGCCACTCAGGTGCCACCACCCTTGCCT  
 AATAAATTTAGTGGCATCATTTTGTCTGACTAGGTGTCCTTCTA

**3' Read Nucleotide Sequence:**

>OriGene 3' read for NM\_000101 unedited  
 AGCCGCATTTGAGNATCGAGTT  
 TTTTTTTTTTTTTCCGGTTCGTGTCATTTATTGCAGGGGGTGCACCTGGCGGGAGGGC  
 AGGTCCGGGGCAAGGTCACACAACCTCGTCGGTACCGGGATGGGGTTGACCTGGGGACC  
 TCCCGGGGGTCCCCCGGCCACCGAAGCCTCCTCCTGTTGGGCTTTTTGGGGGCCTC  
 GGCCGGGGGCGGGGGGGGGTGTGGCGGTTGTTTATGGGCGCTCCAATCTGGGG  
 CCGTTCGCGGGTGGGCTCAATGGGCGTCCACTGTTGCCACGCACAGCCGCCAGTAG  
 GTAAATGCCGTTGCAATGGCCAGCCAGGCGGTCCCAAGGATGGGGGCCAACAGGAACCC  
 GGGGGCCACCGAAAGCAGGAAATGCAGGACGGCCAAACATAGTAATTCCTGGTAAAGGG  
 CCCGAACAGTTTACCACGGGGTTCATGTGCTTATCCCCACCGCTCCATGGGGGAGCC  
 CTTTTTCTTTTCCCCGGGGTACTCCAGCAGGCACAAAACACGCCCGCCACAATGGA  
 GTAGGCACCAAATTACCACTGGGTGAAGCGCCAGCTGTGGCCACAATGCCCTCGTGAT  
 GAGGATAAAGCCGACCCACCGCTGTTTTTTGGCCACATGGCCATTTATTTGCCCAT  
 GCGAAACCAACCGGTGAAACTGCCTGTGCCGAATTTGGGCGCCCTAAGGGAGTCGAT  
 TAAAAATTCTGCGGGTCACTAAAAAGCTTTGTTTATTATAACTNCCACGTAACCCCTTAC  
 GCTATTGGGTAACGGGCCGGGTTACCAATTTTAAAAGCCCGTGATTTTGGGCCAAACA  
 ACTCCATTGACGCAAGGGGGAAACTTGAATCCCGTGGTCACCCCT

**Restriction Sites:**

NotI-NotI

**ACCN:**

NM\_000101

**Insert Size:**

590 bp

**OTI Disclaimer:** Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at [custsupport@origene.com](mailto:custsupport@origene.com) or by calling 301.340.3188 option 3 for pricing and delivery.

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](#)

**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\\_000101.2](#), [NP\\_000092.2](#)

**RefSeq Size:** 743 bp

**RefSeq ORF:** 588 bp

**Locus ID:** 1535

**UniProt ID:** [P13498](#)

**Cytogenetics:** 16q24.2

**Domains:** cytochr\_b558a

**Protein Families:** Druggable Genome, Transmembrane

**Protein Pathways:** Leukocyte transendothelial migration

**Gene Summary:** Cytochrome b is comprised of a light chain (alpha) and a heavy chain (beta). This gene encodes the light, alpha subunit which has been proposed as a primary component of the microbicidal oxidase system of phagocytes. Mutations in this gene are associated with autosomal recessive chronic granulomatous disease (CGD), that is characterized by the failure of activated phagocytes to generate superoxide, which is important for the microbicidal activity of these cells. [provided by RefSeq, Jul 2008]