

## Product datasheet for **MG201754**

### **Cbfb (NM\_022309) Mouse Tagged ORF Clone**

#### Product data:

**Product Type:** Expression Plasmids  
**Product Name:** Cbfb (NM\_022309) Mouse Tagged ORF Clone  
**Tag:** TurboGFP  
**Symbol:** Cbfb  
**Synonyms:** AI893578; PEA2; Pebp2; PEBP2b; Pebbp2  
**Mammalian Cell Selection:** Neomycin  
**Vector:** pCMV6-AC-GFP (PS100010)  
**E. coli Selection:** Ampicillin (100 ug/mL)  
**ORF Nucleotide Sequence:** >MG201754 representing NM\_022309  
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC  
 GCC**CGATCGCC**

ATGCCGCGTCGTCCCGACCAGAGGACAAAGTTCGAGAACGAGGAGTCTTCAGGAAGCTGAGCCGCG  
 AGTGCAGATTAAGTACACGGCTTCAGGGACCGCCACGAGGAGCGCCAGACACGCTCCAGAACGC  
 CTGCCGACGGTCGCTCGGAGATCGCTTTTGTGGCTACAGGAACCAATCTGTCTCTCCAGTTTTTCCG  
 GCCAGCTGGCAGGAGAACAGCGACAAACCTAGCCGGAATATGTCGACTTAGAGAGAGAAGCAGGCA  
 AGGTATACTTGAAGGCTCCCATGATTCTGAATGGAGTGTGTGTTATATGGAAGGGCTGGATTGATCTCCA  
 CAGATTGGATGGTATGGGTTGCCTGGAGTTTATGAGGAGCGAGCCAGCAGGAAGATGCATTAGCACAA  
 CAGGCCTTTGAAGAGGCTCGAAGAAGAAGCTCGAGAATTTGAGGATAGAGACAGGTCTCACCGGGAGAAA  
 TGGAGGCAAGAAGACAGCAAGACCTAGTCTGTTCTAACTTAGGTGGCGGTGATGATCTCAAACCTTCG  
 T

**ACGCGTACGCGGCCGCTCGAG** - GFP Tag - GTTTAA

**Protein Sequence:** >MG201754 representing NM\_022309  
 Red=Cloning site Green=Tags(s)

MPRVVPDQRSKFENEFFRKLRSRECEIKYTGFRDRPHEERQTRFQNAACDRGRSEIAFVATGTNLSLQFFP  
 ASWQGEQRQTPSREYVDLREAGKVYLKAPMILNGVCVIWKGWIDLHRLDGMGCLEFDEERAQQEDALAQ  
 QAFEEARRRTREFEDRDRSHREEMEARRQQDPSPGSNLGGDDLKLR

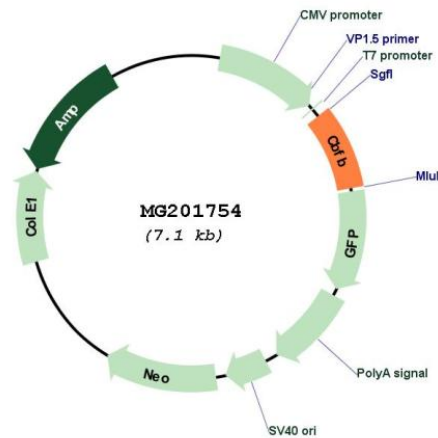
**TRTRPLE** - GFP Tag - V

**Restriction Sites:** Sgfl-MluI



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**Cloning Scheme:**

**Plasmid Map:**


**ACCN:** NM\_022309

**ORF Size:** 561 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\\_022309.4](#)

**RefSeq Size:** 2881 bp

**RefSeq ORF:** 564 bp

**Locus ID:** 12400

**UniProt ID:** [Q08024](#)

**Cytogenetics:** 8 53.04 cM

**Gene Summary:** Forms the heterodimeric complex core-binding factor (CBF) with RUNX family proteins (RUNX1, RUNX2, and RUNX3). RUNX members modulate the transcription of their target genes through recognizing the core consensus binding sequence 5'-TGTGGT-3', or very rarely, 5'-TGCGGT-3', within their regulatory regions via their runt domain, while CBF is a non-DNA-binding regulatory subunit that allosterically enhances the sequence-specific DNA-binding capacity of RUNX. The heterodimers bind to the core site of a number of enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers, LCK, IL3 and GM-CSF promoters (Probable). CBF complexes repress ZBTB7B transcription factor during cytotoxic (CD8+) T cell development. They bind to RUNX-binding sequence within the ZBTB7B locus acting as transcriptional silencer and allowing for cytotoxic T cell differentiation (PubMed:18258917).[UniProtKB/Swiss-Prot Function]