

## **Product datasheet for MR222281**

# Cbfb (NM\_001161457) Mouse Tagged ORF Clone

### **Product data:**

**Product Type:** Expression Plasmids

**Product Name:** Cbfb (NM\_001161457) Mouse Tagged ORF Clone

Tag: Myc-DDK

Symbol: Cbfb

Synonyms: Al893578; PEA2; Pebp2; PEBP2b; Pebpb2

Vector:pCMV6-Entry (PS100001)E. coli Selection:Kanamycin (25 ug/mL)

Cell Selection: Neomycin

ORF Nucleotide >MR222281 representing NM\_001161457
Sequence: Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC

GCCGCGATCGCC

 ${\tt AGTCCTGGTTCTAACTTAGGTGGCGGTGATGATCTCAAACTTCGT}$ 

**ACGCGT**ACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT

ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >MR222281 representing NM\_001161457

Red=Cloning site Green=Tags(s)

MPRVVPDQRSKFENEEFFRKLSRECEIKYTGFRDRPHEERQTRFQNACRDGRSEIAFVATGTNLSLQFFP ASWQGEQRQTPSREYVDLEREAGKVYLKAPMILNGVCVIWKGWIDLHRLDGMGCLEFDEERAQARRQQDP

SPGSNLGGGDDLKLR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV

**Restriction Sites:** Sgfl-Mlul



**OriGene Technologies, Inc.** 9620 Medical Center Drive, Ste 200

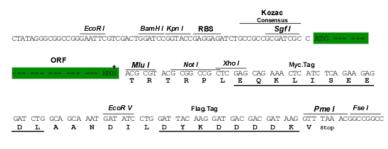
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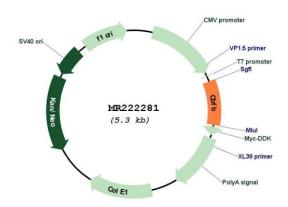
#### **Cloning Scheme:**





<sup>\*</sup> The last codon before the Stop codon of the ORF

### Plasmid Map:



**ACCN:** NM\_001161457

ORF Size: 465 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: <u>NM 001161457.1</u>, <u>NP 001154929.1</u>

 RefSeq Size:
 2797 bp

 RefSeq ORF:
 468 bp

 Locus ID:
 12400

 UniProt ID:
 Q08024

 Cytogenetics:
 8 53.04 cM

 MW:
 18.5 kDa

**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 CBFB 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]