

Product datasheet for RC211623

CBFB (NM_022845) Human Tagged ORF Clone

Product data:

Product Type: Expression Plasmids
Product Name: CBFB (NM_022845) Human Tagged ORF Clone
Tag: Myc-DDK
Symbol: CBFB
Synonyms: PEBP2B
Mammalian Cell Selection: Neomycin
Vector: pCMV6-Entry (PS100001)
E. coli Selection: Kanamycin (25 ug/mL)
ORF Nucleotide Sequence: >RC211623 representing NM_022845
 Red=Cloning site Blue=ORF Green=Tags(s)

TTTTGTAATACGACTCACTATAGGGCGCCGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGATCGCC**

ATGCCGCGTCGTGCCCGACCAGAGAAGCAAGTTCGAGAACGAGGAGTTTTTTAGGAAGCTGAGCCGCG
 AGTGTGAGATTAAGTACACGGGCTTCAGGGACCGCCACGAGGAACGCCAGGCACGCTCCAGAACGC
 CTGCCGACGGCCGCTCGGAAATCGCTTTTGTGGCCACAGGAACCAATCTGTCTCTCCAGTTTTTCCG
 GCCAGCTGGCAGGAGAACAGCGACAAACCTAGCCGAGAGTATGTCGACTTAGAAAGAGAAGCAGGCA
 AGGTATATTTGAAGGCTCCCATGATTCTGAATGGAGTCTGTGTTATCTGGAAAGGCTGGATTGATCTCCA
 AAGACTGGATGGTATGGGCTGTCTGGAGTTTATGATGAGGAGCGAGCCAGCAGGAGGATGCATTAGCACAA
 CAGGCCTTTGAAGAGGCTCGGAGAAGGACACGCGAATTTGAAGATAGAGACAGGTCTCATCGGGAGGAAA
 TGGAGGCAAGAAGACAACAAGACCCTAGTCTGTTCCAATTTAGGTGGTGGTATGACCTCAAACCTTCG
 T

ACGCGTACGCGGCCGCTCGAGCAGAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Protein Sequence: >RC211623 representing NM_022845
 Red=Cloning site Green=Tags(s)

MPRVVPDQRSKFENEFFRKL SRECEIKYTGFRDRPHEERQARFQNA CRDGRSEIAFVATGTNLSLQFFP
 ASWQGEQRQTPSREYVDL EREAGKVYLKAPMILNGVCVIWKGWIDLQRLDGMGCLEFDEERAQQEDALAQ
 QAFEEARRRTREFEDRDRSHREEMEARRQQDPSPGSNLGGDDLKLR

TRTRPLEQKLISEEDLAANDILDYKDDDDKV



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Chromatograms: https://cdn.origene.com/chromatograms/mk6504_a11.zip

Restriction Sites: SgfI-MluI

Cloning Scheme:



ACCN: NM_022845

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.

Note: Plasmids are not sterile. For experiments where strict sterility is required, filtration with 0.22um filter is required.

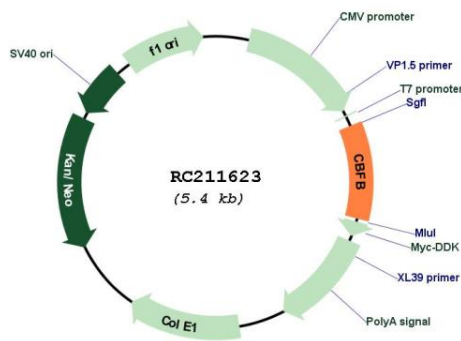
RefSeq: [NM_022845.3](#)

RefSeq Size: 3150 bp

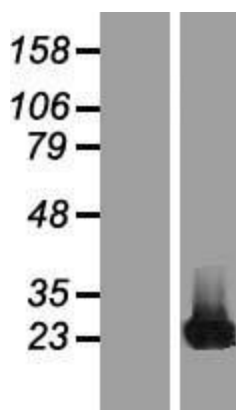
RefSeq ORF:	564 bp
Locus ID:	865
UniProt ID:	Q13951
Cytogenetics:	16q22.1
Domains:	CBF_beta
Protein Families:	Druggable Genome, Transcription Factors
MW:	21.8 kDa

Gene Summary: The protein encoded by this gene is the beta subunit of a heterodimeric core-binding transcription factor belonging to the PEBP2/CBF transcription factor family which master-regulates a host of genes specific to hematopoiesis (e.g., RUNX1) and osteogenesis (e.g., RUNX2). The beta subunit is a non-DNA binding regulatory subunit; it allosterically enhances DNA binding by alpha subunit as the complex binds to the core site of various enhancers and promoters, including murine leukemia virus, polyomavirus enhancer, T-cell receptor enhancers and GM-CSF promoters. Alternative splicing generates two mRNA variants, each encoding a distinct carboxyl terminus. In some cases, a pericentric inversion of chromosome 16 [inv(16)(p13q22)] produces a chimeric transcript consisting of the N terminus of core-binding factor beta in a fusion with the C-terminal portion of the smooth muscle myosin heavy chain 11. This chromosomal rearrangement is associated with acute myeloid leukemia of the M4Eo subtype. Two transcript variants encoding different isoforms have been found for this gene. [provided by RefSeq, Jul 2008]

Product images:



Circular map for RC211623



Western blot validation of overexpression lysate (Cat# [LY411522]) using anti-DDK antibody (Cat# [TA50011-100]). Left: Cell lysates from untransfected HEK293T cells; Right: Cell lysates from HEK293T cells transfected with RC211623 using transfection reagent MegaTran 2.0 (Cat# [TT210002]).