

Product datasheet for **SC111927**

CBFB (NM_001755) Human Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	CBFB (NM_001755) Human Untagged Clone
Tag:	Tag Free
Symbol:	CBFB
Synonyms:	PEBP2B
Mammalian Cell Selection:	None
Vector:	<u>pCMV6-XL5</u>
E. coli Selection:	Ampicillin (100 ug/mL)
Fully Sequenced ORF:	>NCBI ORF sequence for NM_001755, the custom clone sequence may differ by one or more nucleotides

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ATGCCGCGCGTCGTGCCCGACCAGAGAAGCAAGTTCGAGAACGAGGAGTTTTTTAGGAAGCTGAGCCGCG
AGTGTGAGATTAAGTACACGGGCTTCAGGGACCGGCCACGAGGAACGCCAGGCACGCTTCCAGAACGC
CTGCCGCGACGGCCGCTCGGAAATCGCTTTTGTGGCCACAGGAACCAATCTGTCTCTCCAGTTTTTTCCG
GCCAGCTGGCAGGGAGAACAGCGACAAACACCTAGCCGAGAGTATGTCGACTTAGAAAGAGAAGCAGGCA
AGGTATATTTGAAGGCTCCCATGATTCTGAATGGAGTCTGTGTTATCTGGAAAGGCTGGATTGATCTCCA
AAGACTGGATGGTATGGGCTGTCTGGAGTTTGATGAGGAGCGAGCCAGCAGGAGGATGCATTAGCACAA
CAGGCCTTTGAAGAGGCTCGGAGAAGGACACGCGAATTTGAAGATAGAGACAGGTCTCATCGGGAGGAAA
TGGAGGTGAGAGTTTACAGCTGCTGGCAGTAACTGGCAAGAAGACAACAAGACCCTAG
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5' Read Nucleotide Sequence:	<p>>OriGene 5' read for NM_001755 unedited CGTCAGATTTGTACACGACTCATATGGGCGGCCGCGCAATTCGCACGAGGCGCGGGCGGG CGCCTGCAACAAAGGGAAGCGGGCGTCCGGGCGCCGCGGGTGGGCGGTTCAGTCGGTCAGC GCGGAGCCAGCCAGCGGGTGCCCGCGCAAGCCCGAGCGCGGCCGCGGGCGCGGGCTCA GGGCGGGAAGATGCCCGCGTGTGCCCGACCAGAGAAGCAAGTTCGAGAACGAGGAGTT TTTTAGGAAGCTGAGCCGCGAGTGTGAGAGTAAGTACACGGGCTTCAGGGACCGGCCCA CGAGGAACGCCAGGCACGCTTCCAGAAGCCTGCCGCGACGGCCGCTCGGAAATCGCTTT TGTGGCCACAGGAACCAATCTGTCTCTCCAGTTTTTTCCGGCCAGCTGGCAGGGAGAACA GCGACAAACACCTAGCCGAGAGTATGTCGACTTAGAAAGAGAAGCAGGCAAGGTATATTT GAAGGCTCCCATGATTCTGAATGGAGTCTGTGTTATCTGGAAAGGCTGGATTGATCTCCA AAGACTGGATGGTATGGGCTGTCTGGAGTTTGTGAGGAGCGAGCCAGCAGGAGGATGC ATTAGCACAACAGGCCTTTGAAGAGGCTCGGAGAAGGACACGCGAATTTGAAGATAGAGA CAGGTCTCATCGGGAGGAAATGGAGGTGAGAGTTTACAGCTGCTGCCAGTAAGTGGCAA GAAGACAACAAGACCCTAGTCTGGTTCCATTTACGGTGGTGGTATGACCTCCAATTC GTTCATTAATAGCACAGCAGAGGTGTGCTGCCCATCTTTACATACACATTGCTTCTAGTT GGCAGAGATAATGATTAACAGACCACAACCTGTGATAACTGGAGGTAACAGGCTTATTTT TAACCTTGGCCGTCATAGACATCCAG</p>
3' Read Nucleotide Sequence:	<p>>OriGene 3' read for NM_001755 unedited TTGNTGCTACACAAGCTTTTCATTGTGGAAAGTAAATTAACAAACAAACACACAGTATG GCCAATGGTGGCAAAAGCAATCTGGTAGCTTAAGGCAAGTTTTAATGGAGATGAATTTAG AAAAGATGATGCAATGATGTAATTTTGTAAATATAGATTATGATAAAAATATCAAATT GCATCAATAACTTAATAGAAGTAGTTTTCAAAGCCTGTACTACTGGAGAAAAAGGGCTCA TGATCTTAATGCCAGCATTAAAGACAGACAGAAGCAGCATGGTGCTAAATGACAGAAAAAT CCAATTTTACATTAGGATGGTAACAGGAACATTTAAGAGCATTTGATCTTATTTACTGG TGGACCGAAAAGCCCTTAGCTAGACAATAGAGGAAAATGTACCATCATGTTATTTAA AAAATTTAAGTGCAGAAGTAAAAACCAAGGAGCTCTGTAATAAAGTAACATAAAACACC ACTGTAAGGATCACTTAAAAAGCGATTCCCTCAGGGGAAATAGGGCACTGAGTGTGTA ACATGTGAGCTGTACAACACCAAAACCAACCAATTCATTCATAGTACTTATAGTTATGC AAGATCAGCATGGCCTTTAATGACGCATTATTGTTTGAACAATTTAAACACACTCCTTT CCATGCATAACTTCAAATATATAACAAATACTTTTATTTGATACAGGATATCTGTTTATG AAATAAGACCTATATACAATGAAAGTAACACCTCCCTCATCAGTCAAGTACAGTTATATG CTTTTTAAATGCAATGACCTTATTCAGACTTCAGTCCATTTTCTGAATTGACTGTGTCAG TTTTTCACCTTAAAATAATGCATCTAAGATAAAATACATTTTCAAATCCAGAATGTAG AACATTTATAAATGTGACCTGAAAATTTTGAAGGAGTGCCAATGACTTACACTGTTTA</p>
Restriction Sites:	NotI-NotI
ACCN:	NM_001755
Insert Size:	3000 bp
OTI Disclaimer:	Our molecular clone sequence data has been matched to the reference identifier above as a point of reference. Note that the complete sequence of our molecular clones may differ from the sequence published for this corresponding reference, e.g., by representing an alternative RNA splicing form or single nucleotide polymorphism (SNP).
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_001755.2](#), [NP_001746.1](#)

RefSeq Size: 3181 bp

RefSeq ORF: 549 bp

Locus ID: 865

UniProt ID: [Q13951](#)

Cytogenetics: 16q22.1

Domains: CBF_beta

Protein Families: Druggable Genome, Transcription Factors

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]

Transcript Variant: This variant (2) uses an alternate splice site in the 3' coding region compared to variant 1, that causes a frameshift. The resulting isoform (2) is shorter and has a distinct C-terminus compared to isoform 1.