

## Product datasheet for **TG314180**

### CBFB Human shRNA Plasmid Kit (Locus ID 865)

#### Product data:

|                           |   |
|---------------------------|---|
| Product Type:             | shRNA Plasmids  |
| Product Name:             | CBFB Human shRNA Plasmid Kit (Locus ID 865)   |
| Locus ID:                 | 865   |
| Synonyms:                 | PEBP2B  |
| Vector:                   | pGFP-V-RS (TR30007)   |
| E. coli Selection:        | Kanamycin   |
| Mammalian Cell Selection: | Puromycin   |
| Format:                   | Retroviral plasmids   |
| Components:               | CBFB - Human, 4 unique 29mer shRNA constructs in retroviral GFP vector(Gene ID = 865). 5µg purified plasmid DNA per construct<br>29-mer scrambled shRNA cassette in pGFP-V-RS Vector, TR30013, included for free.   |
| RefSeq:                   | <a href="#">NM_001755</a> , <a href="#">NM_022845</a> , <a href="#">NM_001755.1</a> , <a href="#">NM_001755.2</a> , <a href="#">NM_022845.1</a> , <a href="#">NM_022845.2</a> , <a href="#">BC018509</a> , <a href="#">BM679848</a> , <a href="#">NM_001368710</a> , <a href="#">NM_001368707</a> , <a href="#">NM_001368708</a> , <a href="#">NM_001368709</a> , <a href="#">NM_001755.3</a> , <a href="#">NM_022845.3</a>   |
| UniProt ID:               | <a href="#">Q13951</a>  |
| 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] |



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- shRNA Design:** These shRNA constructs were designed against multiple splice variants at this gene locus. To be certain that your variant of interest is targeted, please contact [techsupport@origene.com](mailto:techsupport@origene.com). If you need a special design or shRNA sequence, please utilize our [custom shRNA service](#).
- Performance Guaranteed:** OriGene guarantees that the sequences in the shRNA expression cassettes are verified to correspond to the target gene with 100% identity. One of the four constructs at minimum are guaranteed to produce 70% or more gene expression knock-down provided a minimum transfection efficiency of 80% is achieved. Western Blot data is recommended over qPCR to evaluate the silencing effect of the shRNA constructs 72 hrs post transfection. To properly assess knockdown, the gene expression level from the included scramble control vector must be used in comparison with the target-specific shRNA transfected samples.
- For non-conforming shRNA, requests for replacement product must be made within ninety (90) days from the date of delivery of the shRNA kit. To arrange for a free replacement with newly designed constructs, please contact Technical Services at [techsupport@origene.com](mailto:techsupport@origene.com). Please provide your data indicating the transfection efficiency and measurement of gene expression knockdown compared to the scrambled shRNA control (Western Blot data preferred).