

CBFB Protein, Human, Recombinant (His)

General Information

Synonyms:	core-binding factor, β subunit; core-binding factor, beta subunit; PEBP2B
Protein Construction:	A DNA sequence encoding the mature form of human CBFB (Q13951-1) (Met1-Pro182) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q13951-1
Molecular Weight:	23.3 kDa (predicted); 27 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 80 % as determined by SDS-PAGE
Endotoxin:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 μ m filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

CBFB 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). CBFB 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 CFBF gene. Mutations in CFBF are implicated in cases of breast cancer.

Reference

- Hart SM. et al., 2003, Haematologica. 87(12): 1307-23.
Liu P. et al., 1995, Cold Spring Harb Symp Quant Biol. 59: 547-53.
Liu P. et al., 1993, Science. 261 (5124): 1041-4.

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