

# Recombinant Human ZBT7B Protein

**For Research Use Only**

## 1. Basic Product Information

Catalog No.: REP51093

Size: 10ug, 100ug

Protein Name: Zinc finger and BTB domain-containing protein 7B (Krueppel-related zinc finger protein cKrox) (hcKrox) (T-helper-inducing POZ/Krueppel-like factor) (Zinc finger and BTB domain-containing protein 15) (Zinc finger protein 67 homolog) (Zfp-67) (Zinc finger protein 857B) (Zinc finger protein Th-POK)

Synonym: ZBTB7B, ZBTB15, ZFP67, ZNF857B

UniProt ID: O15156

UniProt Link: [www.uniprot.org/uniprotkb/O15156/entry](http://www.uniprot.org/uniprotkb/O15156/entry)

Species Source: Human

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 539 AA

Molecular Weight: 58 KD

Protein Tag: C-terminal His6

## 2. Amino Acid Sequence

MGSPEDDLIGIPFPDHSSELLSCLNEQRQLGHLCDLTIRTQGLEYRTHRAVLAACSHYFKKLFTEGG  
GGAVMGAGGSGTATGGAGAGVCELDVFGPEALGALLEFAYTATLTSSANMPAVLQAARLLEIPCVI  
AACMEILQGSGLEAPSPDEDDCERARQYLEAFATATASGVPNGEDSPPQVPLPPPPPPPPRPVARR  
SRKPRKAFLQTKGARANHLPVEVPTVPAHPLTYEEEEVAGRVGSSGGSGPGDSYSPPTGTASPPE  
GPQSYEPYEGEEEEELVYPPAYGLAQGGGPPLSPEELGSEDAIDPDL MAYLSSLHQDNLAPGLD  
SQDKLVRKRRSQMPQECPVCHKIIHGAGKLPRHMRTHTGEKPFACEVCGVRFTNRNDKLIHMRKHT  
GERPYSCPHCPARFLHSYDLKNHMHHTGDRPYECHLCHKAFKEDHLQRHLKGQNCLEVRTRRR  
RKDDAPPHYPPPPSTAAASPAGLDLSNGHLDTFRLSLARFWEQSAPTGPVSTPGPPDDDEEEGAPT  
TPQAEGAMESS

## 3. Buffer Composition

Liquid format: PBS-based buffer containing 50% glycerol. Glycerol concentration can be customized upon customer request; please state special requirements when placing your order.

Lyophilized format: Buffer before lyophilization is PBS supplemented with 6% trehalose.

## 4. Storage Conditions

Upon receipt, store the product at -20 °C or -80 °C. Aliquot the product for on-demand use to preserve protein activity and prevent denaturation and inactivation caused by repeated freeze-thaw cycles.

## 5. Product Description

This product is recombinant Zinc finger and BTB domain-containing protein 7B (Krueppel-related zinc finger protein cKrox) (hckrox) (T-helper-inducing POZ/Krueppel-like factor) (Zinc finger and BTB domain-containing protein 15) (Zinc finger protein 67 homolog) (Zfp-67) (Zinc finger protein 857B) (Zinc finger protein Th-POK) produced using the HEK293T eukaryotic cell expression system. It is suitable for in-vitro functional assays, protein-protein interaction studies, antibody preparation and other biomedical research applications.

**Protein Function:** Transcription regulator that acts as a key regulator of lineage commitment of immature T-cell precursors. Exerts distinct biological functions in the mammary epithelial cells and T cells in a tissue-specific manner. Necessary and sufficient for commitment of CD4 lineage, while its absence causes CD8 commitment. Development of immature T-cell precursors (thymocytes) to either the CD4 helper or CD8 killer T-cell lineages correlates precisely with their T-cell receptor specificity for major histocompatibility complex class II or class I molecules, respectively. Cross-antagonism between ZBTB7B and CBF complexes are determinative to CD4 versus CD8 cell fate decision. Suppresses RUNX3 expression and imposes CD4+ lineage fate by inducing the SOCS suppressors of cytokine signaling. induces, as a transcriptional activator, SOCS genes expression which represses RUNX3 expression and promotes the CD4+ lineage fate. During CD4 lineage commitment, associates with multiple sites at the CD8 locus, acting as a negative regulator of the CD8 promoter and enhancers by epigenetic silencing through the recruitment of class II histone deacetylases, such as HDAC4 and HDAC5, to these loci. Regulates the development of IL17-producing CD1d-restricted natural killer (NK) T cells. Also functions as an important metabolic regulator in the lactating mammary glands. Critical feed-forward regulator of insulin signaling in mammary gland lactation, directly regulates expression of insulin receptor substrate-1 (IRS-1) and insulin-induced Akt-mTOR-SREBP signaling (By similarity). Transcriptional repressor of the collagen COL1A1 and COL1A2 genes. May also function as a repressor of fibronectin and possibly other extracellular matrix genes (PubMed:9370309). Potent driver of brown fat development, thermogenesis and cold-induced beige fat formation. Recruits the brown fat lncRNA 1 (Blnc1):HNRNPU ribonucleoprotein complex to activate thermogenic gene expression in brown and beige adipocytes (By similarity).

**Subcellular Localization:** Nucleus .

## 6. Notes

- Avoid repeated freeze-thaw cycles to maintain protein stability and biological activity.
- Please specify special buffer-composition requirements at the time of order placement.
- For research use only. Not intended for clinical diagnosis, therapeutic use or commercial manufacturing.