

Recombinant Mouse ZBT7B Protein

For Research Use Only

1. Basic Product Information

Catalog No.: REP51678

Size: 10ug, 100ug

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

Synonym: Zbtb7b, Thpok, Zfp67

UniProt ID: Q64321

UniProt Link: www.uniprot.org/uniprotkb/Q64321/entry

Species Source: Mouse

Expression System: HEK293T eukaryotic cell expression system Sequence

Length: 544 AA

Molecular Weight: 59 KD

Protein Tag: C-terminal His6

2. Amino Acid Sequence

MGSPEDDLIGIPFPDHSSSELLSCLNEQRQLGHLCDLTIRTQGLEYRTHRAVLAACSHYFKKLFTEGG
GGTVMGTGGGGTASGGAGAGVCELDVFGPEALGALLEFAYTATLTSSANMPAVLQAARLLEIPCVI
AACMEILQGSGLLEAPSPDEDDCERARQYLEAFATATTTASTSGMPNGEDSPPQVPLPPPPPPPRP
VARRSRKPRKAFLQTKGARANHLVPEAPTVLTHPLTYEEEEEMVGR LGNSGGSGLGDSYSPPTGAAS
PAEGPLNYEVFEGEEEEEMAYPPGYGLAQSNESLSPEELGSEDDPIDPDL MAYLSSLHQDALTP
GLDGQDKLVRKRRSQMPQECPVCHKIIHGAGKLPRHMRHTHTGEKPFACEVCGVRFTRNDKLIKIMR
KHTGERPYSCPHCPARFLHSYDLKNHMH LHTGDRPYECHLCHKAFKEDHLQRHLKGQNCLEVRT
RRRRKDDVAAPHYPPSTTTSSPAGLDLSNGHLDTFHLSLARFWEQSATTGPPVTTQGPPEEEEEEE
GTPTTPQAEGAMESS

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) (c-Krox) (T-helper-inducing POZ/Krueppel-like factor) (Zinc finger protein 67) (Zfp-67) (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 (PubMed:15729333, PubMed:29420538). 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 (PubMed:15729333, PubMed:18258917, PubMed:23481257, PubMed:24880459). 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 (PubMed:24880459). 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 (PubMed:22730529). Regulates the development of IL17-producing CD1d-restricted natural killer (NK) T cells (PubMed:23105140). 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 (PubMed:29420538). Transcriptional repressor of the collagen COL1A1 and COL1A2 genes. May also function as a repressor of fibronectin and possibly other extracellular matrix genes (PubMed:7937772). Potent driver of brown fat development, thermogenesis and cold-induced beige fat formation (PubMed:28784777). Recruits the brown fat lncRNA 1 (Blnc1):HNRNPU ribonucleoprotein complex to activate thermogenic gene expression in brown and beige adipocytes (PubMed:28784777).

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.