

Product datasheet for **MC218276**

Zbtb7b (NM_009565) Mouse Untagged Clone

Product data:

Product Type:	Expression Plasmids
Product Name:	Zbtb7b (NM_009565) Mouse Untagged Clone
Tag:	Tag Free
Symbol:	Zbtb7b
Synonyms:	c-Krox; Thpok; Zfp67
Mammalian Cell Selection:	Neomycin
Vector:	pCMV6-Entry (PS100001)
E. coli Selection:	Kanamycin (25 ug/mL)



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Fully Sequenced ORF: >MC218276 representing NM_009565
 Red=Cloning site Blue=ORF Orange=Stop codon

TTTTGTAATACGACTCACTATAGGGCGGCCGGGAATTCGTCGACTGGATCCGGTACCGAGGAGATCTGCC
 GCC**CGGATCGCC**

ATGGGGAGCCCCGAGGATGACCTGATTGGAATCCCATTCCAGACCACAGCAGCGAGCTCCTGAGCTGCC
 TGAACGAGCAGCGCCAGCTGGGCCATCTGTGCGACCTCACCATCAGGACGCAGGGTCTTGAGTACCGCAC
 CCACAGGGCTGTGCTGGCTGCCTGTAGCCACTACTTCAAGAAGCTCTTTACGGAGGGAGGAGGGGAACC
 GTGATGGGAACAGGGGGTGGTGGGACGGCTTCTGGGGGAGCAGGGGCCGGTGTGTGTGAGCTGGACTTTG
 TAGGGCCAGAGGCCCTAGGTGCCCTGCTCGAGTTTGCTTACACAGCCACACTGACCACCAGCAGCGCCAA
 TATGCCGGCTGTACTCCAAGCTGCTCGGCTACTGGAAATCCCGTGTGCATCGCTGCTTGCATGGAGATT
 CTAACAAGCAGTGGGCTGGAAGCCCCAGCCCCGATGAGGATGACTGTGAGCGAGCCGACAGTACCTGG
 AGGCTTTTGCCACTGCCACCACCACAGCCTCAACCTCAGGAATGCCAACGGTGAAGACAGCCCTCCACA
 GGTGCCCTCCTACCGCCGCCGCCACCGCCACCTCGACCTGTTGCCCGTGCAGCCGCAAACCCCGAAA
 GCTTTTCTTCAAACCAAAGGGGCCGAGCAAACCATCTGGTCCCTGAGGCACCCACAGTACTCACCCATC
 CCTTGACCTACGAAGAAGAAGAGATGGTTGGTAGATTGGGTAACAGTGGGGGCAGTGGGCTCGGAGATAG
 CTATAGTCTCTACAGGTGCCGCTCACCTGCCGAGGGGCCCTGAACTATGAAGTCTTTGAAGGTGAG
 GAAGAAGAGGAGGAGATGGCATACCCCCAGGCTACGGGCTAGCCAGAGTAATGAGCCCTCGCTATCAC
 CAGAGGAGCTGGGCTCAGATGAAGATCCCATCGACCCGACCTGATGGCTTACCTAAGTTCGCTGCACCA
 GGACGCCCTGACACCAGGCTGGATGGCCAAGACAAGCTGGTGGTAAACGCCGTTACAGATGCCCCAA
 GAGTGCCAGTCTGTACAAGATAATCCACGGGCAGGCAAACCTGCCTCGGCACATGAGGACCCACACTG
 GTGAGAAGCCCTTTGCCCTGTGAGGTCTGGCGCTCCGCTTACCAGGAATGACAAGCTGAAGATCCACAT
 GCGGAAGCACACAGGAGAACGCCCTACTCGTGCCCCACTGCCAGCCCGCTTCCTGCATAGCTACGAC
 CTCAAGAACCACATGCACCTGCACACCGGGGACCGGCCCTATGAGTGCCACCTGTGCCACAAGGCCTTG
 CCAAGGAGGACCCTGCAGCGCATCTCAAGGTGAGAACTGCCTGGAGGTGCGCACCCGAAGGCGCCG
 CAAGGATGACGTGGCAGCCCTCACTACCACCGCCCTCGACCACCCTCATCCCCTGCTGGCCTCGAC
 CTTTCCAATGGCCACCTGGACACCTTCCACCTCTCTGGCTCGATTCTGGGAGCAGTCGGCCACCACGG
 GACCCCACTACTACACAAGGGCCCCCTGAGGAGGAGGAAGAGGAAGGGACACCCACCACACACAGGC
 CGAAGGTGCCATGGAGTCTCT**TAA**

ACGCGTACGCGGCCGCTCGAGCAGAAACTCATCTCAGAAGAGGATCTGGCAGCAAATGATATCCTGGATT
 ACAAGGATGACGACGATAAGGTTTAA

Restriction Sites: Sgfl-MluI
ACCN: NM_009565
Insert Size: 1635 bp

OTI Disclaimer: Due to the inherent nature of this plasmid, standard methods to replicate additional amounts of DNA in E. coli are highly likely to result in mutations and/or rearrangements. Therefore, OriGene does not guarantee the capability to replicate this plasmid DNA. Additional amounts of DNA can be purchased from OriGene with batch-specific, full-sequence verification at a reduced cost. Please contact our customer care team at custsupport@origene.com or by calling 301.340.3188 option 3 for pricing and delivery.

The molecular sequence of this clone aligns with the gene accession number as a point of reference only. However, individual transcript sequences of the same gene can differ through naturally occurring variations (e.g. polymorphisms), each with its own valid existence. This clone is substantially in agreement with the reference, but a complete review of all prevailing variants is recommended prior to use. [More info](#)

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_009565.4](#), [NP_033591.2](#)

RefSeq Size: 3704 bp

RefSeq ORF: 1635 bp

Locus ID: 22724

UniProt ID: [Q64321](#)

Cytogenetics: 3 39.09 cM

Gene Summary:

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:24880459, PubMed:18258917, PubMed:23481257). 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). [UniProtKB/Swiss-Prot Function]