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ZBTB7B Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP6370B

Product Information

Application	IF, WB, E
Primary Accession	O15156
Reactivity	Human
Predicted	Mouse, Rat, Bovine, Canine, Chicken
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	58027
Antigen Region	440-469

Additional Information

Gene ID	51043
Other Names	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, ZBTB7B, ZBTB15, ZFP67, ZNF857B
Target/Specificity	This ZBTB7B antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 440-469 amino acids from the C-terminal region of human ZBTB7B.
Dilution	IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	ZBTB7B Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ZBTB7B (HGNC:18668)
Synonyms	ZBTB15, ZFP67, ZNF857B

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 naural 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).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q64321}.

Background

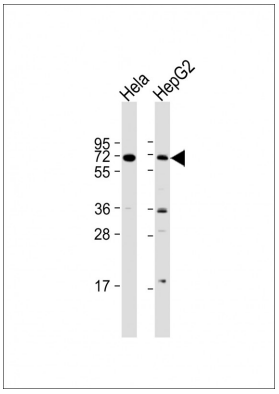
ZBTB7B is a transcription regulator that acts as a key regulator of lineage commitment of immature T-cell precursors. It is necessary and sufficient for commitment of CD4 lineage, while its absence causes CD8 commitment. Development of immature T-cell precursors (thymocytes) to either the CD4 helper 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. ZBTB7B is a transcriptional repressor of the collagen COL1A1 and COL1A2 genes. It may also function as a repressor of fibronectin and possibly other extracellular matrix genes.

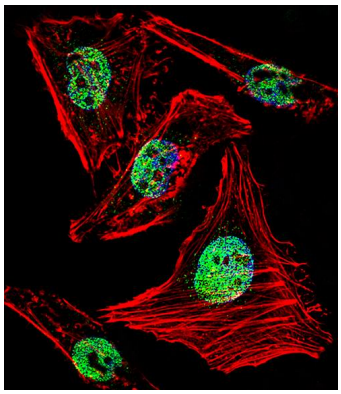
References

Galera,P., Proc. Natl. Acad. Sci. U.S.A. 91 (20), 9372-9376 (1994)
Widom,R.L., Gene 198 (1-2), 407-420 (1997)
Heegaard,A.M., J. Bone Miner. Res. 12 (12), 2050-2060 (1997)
Widom,R.L., Matrix Biol. 20 (7), 451-462 (2001)

Images

All lanes : Anti-ZBTB7B Antibody (C-term) at 1:1000 dilution Lane 1: Hela whole cell lysate Lane 2: HepG2 whole cell lysate Lysates/proteins at 20 µg per lane. Secondary Goat Anti-Rabbit IgG, (H+L), Peroxidase conjugated at 1/10000 dilution. Predicted band size : 58 kDa Blocking/Dilution buffer: 5% NFDM/TBST.





Fluorescent confocal image of Hela cell stained with ZBTB7B Antibody (C-term)(Cat#AP6370b).Hela cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with ZBTB7B primary antibody (1:25, 1 h at 37°C). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37°C).Cytoplasmic actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min). ZBTB7B immunoreactivity is localized to Nucleus significantly.

Citations

- Expression of master regulators of helper T-cell differentiation in peripheral T-cell lymphoma, not otherwise specified, by immunohistochemical analysis.
- Expression of Master Regulators of T-cell, Helper T-cell and Follicular Helper T-cell Differentiation in Angioimmunoblastic T-cell Lymphoma.

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