10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

TCF12 Antibody

Catalog # ASC11214

Product Information

Application	WB, ICC, E
Primary Accession	Q99081
Other Accession	AAH50556, 29792012
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	72965
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TCF12 antibody can be used for detection of TCF12 by Western blot at 0.5 - 1 g/mL. Antibody can also be used for immunocytochemistry starting at 10 g/mL.

Additional Information

Gene ID	6938
Other Names	Transcription factor 12, TCF-12, Class B basic helix-loop-helix protein 20, bHLHb20, DNA-binding protein HTF4, E-box-binding protein, Transcription factor HTF-4, TCF12, BHLHB20, HEB, HTF4
Target/Specificity	TCF12;
Reconstitution & Storage	TCF12 antibody can be stored at 4℃ for three months and -20℃, stable for up to one year. As with all antibodies care should be taken to avoid repeated freeze thaw cycles. Antibodies should not be exposed to prolonged high temperatures.
Precautions	TCF12 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TCF12
Synonyms	BHLHB20, HEB, HTF4
Function	Transcriptional regulator. Involved in the initiation of neuronal differentiation. Activates transcription by binding to the E box (5'-CANNTG-3') (By similarity). May be involved in the functional network that regulates the development of the GnRH axis (PubMed:32620954).
Cellular Location	Nucleus.

Tissue Location	Expressed in several tissues and cell types including skeletal muscle, thymus, and a B-cell line

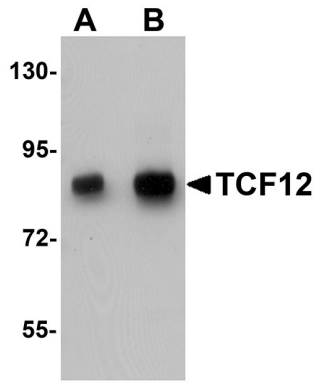
Background

TCF12 Antibody: TCF12, also known as HTF4, is a member of the basic helix-loop-helix (bHLH) E-protein family that recognizes the consensus binding site (E-box) CANNTG. TCF12 is expressed in many tissues, among them skeletal muscle, thymus, B- and T-cells, and may participate in regulating lineage-specific gene expression through the formation of heterodimers with other bHLH E-proteins. TCF12, in combination with E2A, is required to block thymocyte proliferation prior to pre-TCR expression and is critical for proper T cell differentiation. Recent reports have shown that TCF12 is also a critical factor required for the development of invariant natural killer T cells.

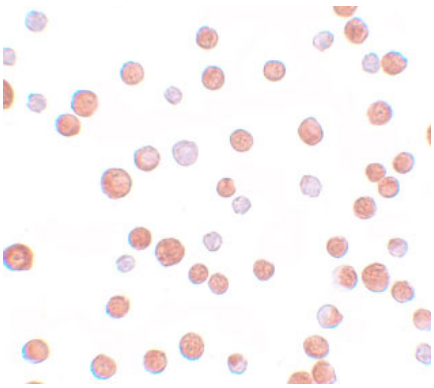
References

Zhang Y and Bina M. The nucelotide sequence of the human transcription factor HTF4a cDNA. DNA Seq.1992; 2:397-403.
Murre C, McCaw PS, Vaesin H, et al. Interactions between heterologous helix-loop-helix proteins generate complexes that bind specifically to a common DNA sequence. Cell1989; 58:537-44.
Wojciechowski J, Lai A, Kondo M, et al. E2A and HEB are required to block thymocyte proliferation prior to pre-TCR expression. J. Immunol.2007; 178:5717-26.
D'Cruz LM, Knell J, Fujimoto JK, et al. An essential role for the transcription factor HEB in thymocyte survival, Tcra rearrangement and the development of natural killer T cells. Nat. Immunol.2010; 11:240-9.

Images



Western blot analysis of TCF12 in HeLa cell lysate with TCF12 antibody at (A) 0.5 and (B) 1 µg/mL.



Immunocytochemistry of TCF12 in HeLa cells with TCF12 antibody at 10 µg/mL.