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TCF3 Antibody

Catalog # ASC11069

Product Information

Application	WB, IF, E, IHC-P
Primary Accession	P15923
Other Accession	NP_003191, 27777636
Reactivity	Human, Mouse, Rat
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Calculated MW	67600
Concentration (mg/ml)	1 mg/mL
Conjugate	Unconjugated
Application Notes	TCF3 antibody can be used for detection of TCF3 by Western blot at 1 g/mL. Antibody can also be used for immunohistochemistry starting at 5 g/mL. For immunofluorescence start at 20 g/mL.

Additional Information

Gene ID	6929
Other Names	Transcription factor E2-alpha, Class B basic helix-loop-helix protein 21, bHLHb21, Immunoglobulin enhancer-binding factor E12/E47, Immunoglobulin transcription factor 1, Kappa-E2-binding factor, Transcription factor 3, TCF-3, Transcription factor ITF-1, TCF3, BHLHB21, E2A, ITF1
Target/Specificity	TCF3;
Reconstitution & Storage	TCF3 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	TCF3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	TCF3
Synonyms	BHLHB21, E2A, ITF1
Function	Transcriptional regulator involved in the initiation of neuronal differentiation and mesenchymal to epithelial transition (By similarity). Heterodimers between TCF3 and tissue-specific basic helix- loop-helix (bHLH) proteins play major roles in determining tissue- specific cell fate during embryogenesis, like muscle or early B-cell differentiation (By similarity). Together with TCF15,

required for the mesenchymal to epithelial transition (By similarity). Dimers bind DNA on E-box motifs: 5'-CANNTG-3' (By similarity). Binds to the kappa-E2 site in the kappa immunoglobulin gene enhancer (PubMed:2493990). Binds to IEB1 and IEB2, which are short DNA sequences in the insulin gene transcription control region (By similarity).

Cellular Location Nucleus.

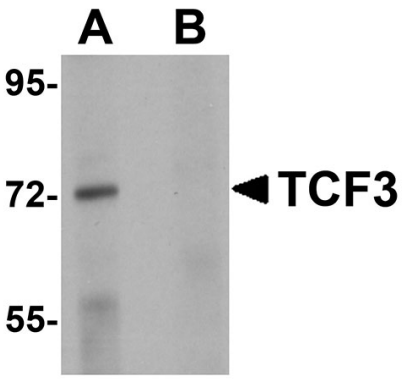
Background

TCF3 Antibody: The TCF3 gene, also called E2A, encodes two basic helix-loop-helix (bHLH) transcription factors, E12 and E47, through alternative splicing. These transcription factors are involved in mediating canonical Wnt signaling, which is very important in a diverse array of cellular functions such as stem cell proliferation, self-renewal, activation, fate determination, differentiation and aging and senescence. They bind beta-catenin and can act as transcriptional activators or repressors for Wnt target genes, and have been shown to regulate specific target genes during CNS development downstream of Wnt signaling. TCF3/Lef complexes are also known to play key roles in controlling cell fate lineages in multipotent skin stem cells.

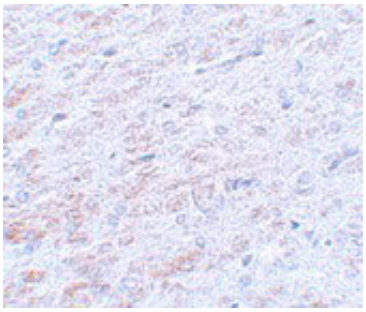
References

Korinek V, Barker N, Willert K, et al. Two members of the Tcf family implicated in Wnt/beta-catenin signaling during embryogenesis in the mouse. Mol. Cell Biol.1998; 18:1248-1256.
Gribble SL, Kim HS, Bonner J, et al. Tcf3 inhibits spinal cord neurogenesis by regulating sox4a expression. Dev. Cell2009; 136:781-9.
Cole MF, Johnstone SE, Newman JJ, et al. Tcf3 is an integral component of the core regulatory circuitry of embryonic stem cells. Genes Dev.2008;22:746-55.
Nguyen H, Rendl M and Fuchs E. Tcf3 governs stem cell features and represses cell fate determination in skin. Cell2006; 127:171-83.

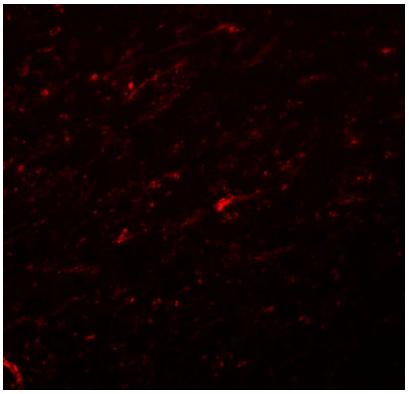
Images



Western blot analysis of TCF3 in Human brain tissue lysate with TCF3 antibody at 1 µg/mL in (A) the absence and (B) presence of peptide blocking.



Immunohistochemistry of TCF3 in rat liver tissue with TCF3 antibody at 5 µg/mL.



Immunofluorescence of TCF3 in rat brain tissue with TCF3 antibody at 20 µg/mL.