

Purified anti-TCF1 (TCF7) Antibody

Catalog# / Size	655202 / 100 µg
Clone	7F11A10
Regulatory Status	RUO
Other Names	T-cell-specific transcription factor 1, transcription factor 7, TCF7
Isotype	Mouse IgG1, κ
Description	TCF1 is the first identified member of the T-cell-specific transcription factor family. It plays an important role in T cell development and differentiation. TCF1 is inactivated by association with the transcriptional repressor TLE proteins. During Wnt signaling, the transcriptional coactivator CTNNB1 accumulates and, in turn, replaces the transcriptional repressor associated with TCF1. Interaction with CTNNB1 results in transactivation of TCF1 target genes. Deletion of TCF1 causes massive apoptosis of double positive thymocyte, suggesting that TCF1 is required for thymocyte survival during T cell development. In addition to its function in thymus, TCF1 promotes T cell differentiation to Th2 cells in the periphery through transcriptional activation of GATA3.

Product Details

Verified Reactivity	Human
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Partial TCF1 recombinant protein (116-334 aa)
Formulation	This antibody is provided in phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	Affinity purified
Concentration	0.5 mg/ml
Storage & Handling	Upon receipt, store undiluted between 2°C and 8°C.
Application	WB - Quality tested ICC, IHC-P - Verified
Recommended Usage	Each lot of this antibody is quality control tested by Western blotting . For Western blotting, the suggested use of this reagent is 0.1 - 0.5 µg per mL. For immunocytochemistry microscopy, a concentration range of 1-5 µg/mL is recommended. For immunohistochemistry on formalin-fixed paraffin-embedded tissue sections, a concentration range of 1 - 10 µg/mL is suggested. It is recommended that the reagent be titrated for optimal performance for each application.
Product Citations	1. Bengsch B <i>et al.</i> 2018. <i>Immunity</i> . 48(5):1029-1045 . PubMed 2. Tian Y, <i>et al.</i> 2019. <i>Cell Rep.</i> 29:4482. PubMed
RRID	AB_2562103 (BioLegend Cat. No. 655202)

Antigen Details

Structure	384 amino acids, predicted molecular weight of 42 kD. Contains a HMG box DNA binding domain and a CTNNB1 (β-catenin) binding domain.
Distribution	Nucleus
Function	TCF1 is a transcription factor, involved in the canonical Wingless/Integration 1 (Wnt) signaling pathway. TCF1 is essential for survival of CD4+CD8+ double positive thymocytes and differentiation of T cells in the periphery.

Interaction	TCF1 interacts with CTNNB1, TLE1, TLE2, TLE3, TLE4, and AES.
Cell Type	Tregs
Biology Area	Cell Biology, Immunology, Transcription Factors
Molecular Family	Nuclear Markers, TCRs
Antigen References	<ol style="list-style-type: none"> 1. Mao CD, <i>et al.</i> 2011. <i>Crit. Rev. Eukaryot. Gene Expr.</i> 21:207. 2. Germar K, <i>et al.</i> 2011. <i>P. Natl. Acad. Sci. USA</i> 108:20060. 3. Wang R, <i>et al.</i> 2011. <i>J. Immunol.</i> 187:5964. 4. Weber BN, <i>et al.</i> 2011. <i>Nature</i> 476:63. 5. Jeannot G, <i>et al.</i> 2010. <i>P. Natl. Acad. Sci. USA</i> 107:9777. 6. Staal FJ, <i>et al.</i> 1999. <i>Int. Immunol.</i> 11:317.
Gene ID	6932

Related Protocols

[Immunocytochemistry Staining Protocol](#)

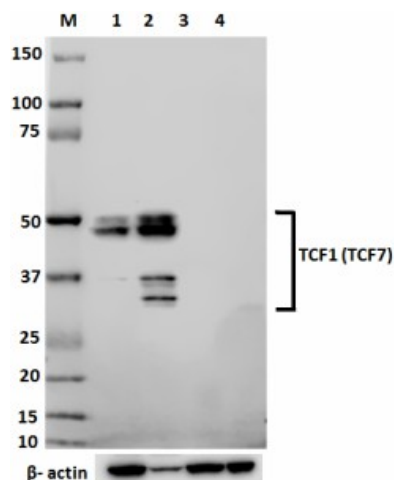
[Western Blotting Protocol](#)

[Immunohistochemistry Protocol for Paraffin-Embedded Sections](#)

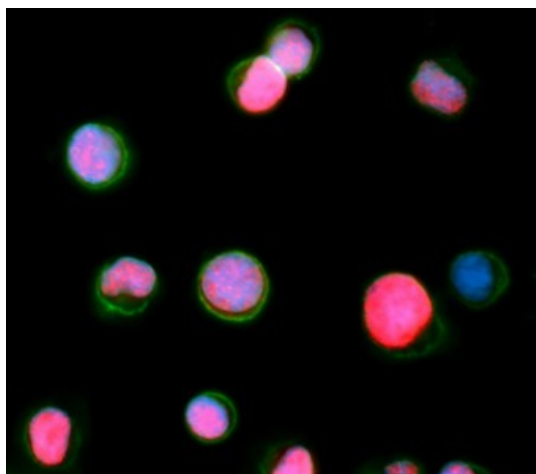
Other Formats

Purified anti-TCF1 (TCF7), Alexa Fluor® 647 anti-TCF1 (TCF7), PE anti-TCF1 (TCF7), Direct-Blot™ HRP anti-TCF1 (TCF7)

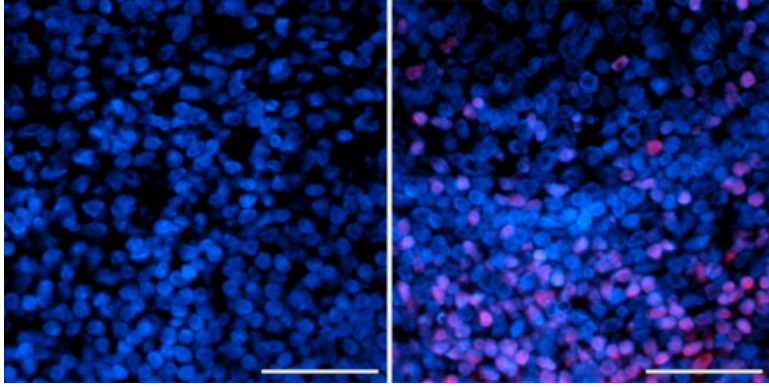
Product Data



Total cell lysate from Jurkat (lane 1), Molt-4 (lane 2), HeLa (lane 3) and EL4 (lane 4) cell lines (15 µg protein for each) were resolved by 4-12% Bis-Tris gel electrophoresis, transferred to nitrocellulose, and probed with 2 µg/mL (1:250 dilution) of purified anti-TCF1 (TCF7) antibody (clone 7F11A10) (upper blot). Proteins were visualized using chemiluminescence detection after incubation with 1:3000 dilution of HRP conjugated anti-mouse-IgG secondary antibody for the anti-TCF1 (TCF7) antibody (upper blot) 1:5000 dilution of Direct-Blot™ HRP anti-β-Actin (clone 2F1-1, lower blot). Lane M: Molecular Weight Marker



Jurkat cells were fixed with 4% PFA for ten minutes, permeabilized with 0.5% Triton X-100 for five minutes, and blocked with 5% FBS for 30 minutes. Then the cells were stained with 2 µg/mL anti-TCF1 Antibody (clone 7F11A10) followed by Alexa Fluor® 594 (red) conjugated goat anti-mouse IgG in blocking buffer for two hours at room temperature. Actin filaments were labeled with Alexa Fluor® 488 Phalloidin (green). Nuclei were counterstained with DAPI (blue). The image was captured with a 60X objective.



IHC staining using purified anti- TCF7 antibody (clone 7F11A10) on formalin-fixed paraffin-embedded human tonsil tissue. Following antigen retrieval using 1X Tris-EDTA (final concentration 0.05M), the tissue was incubated with 10 $\mu\text{g}/\text{mL}$ of antibody overnight at 4°C, followed by incubation with 2.5 $\mu\text{g}/\text{mL}$ of Alexa Fluor® 647 goat anti-mouse IgG antibody (Cat. No. 405322) for one hour at room temperature. Nuclei were counterstained with DAPI (blue) (Cat. No. 422801), and the slide was mounted with ProLong™ Gold Antifade Mountant. The images shown above (left: secondary only control; right: clone 7F11A10 at 10 $\mu\text{g}/\text{mL}$) were captured with a 40X objective. Scalebar = 50 μM .

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