

## PE anti-TCF1 (TCF7) Antibody

<b>Catalog# / Size</b>	655207 / 25 tests 655208 / 100 tests
<b>Clone</b>	7F11A10
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	T-cell-specific transcription factor 1, transcription factor 7, TCF7
<b>Isotype</b>	Mouse IgG1, $\kappa$
<b>Description</b>	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

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<b>Verified Reactivity</b>	Human
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Immunogen</b>	Partial TCF1 recombinant protein (116-334 aa)
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	Each lot of this antibody is quality control tested by intracellular flow cytometry using our <a href="#">True-Nuclear™ Transcription Factor Staining Protocol</a> . For flow cytometric staining, the suggested use of this reagent is 5 $\mu$ l per 106 cells in 100 $\mu$ l volume. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Excitation Laser</b>	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
<b>Product Citations</b>	1. Collins PL <i>et al.</i> 2018. Cell. 176(1-2):348-360 . <a href="#">PubMed</a> 2. Mold JE, <i>et al.</i> 2021. Cell Reports. 35(8):109174. <a href="#">PubMed</a>
<b>RRID</b>	AB_2728491 (BioLegend Cat. No. 655207) AB_2728492 (BioLegend Cat. No. 655208)

### Antigen Details

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<b>Structure</b>	384 amino acids, predicted molecular weight of 42 kD. Contains a HMG box DNA binding domain and a CTNNB1 ( $\beta$ -catenin) binding domain.
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<b>Distribution</b>	Nucleus
<b>Function</b>	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.
<b>Interaction</b>	TCF1 interacts with CTNNB1, TLE1, TLE2, TLE3, TLE4, and AES.
<b>Cell Type</b>	Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Transcription Factors
<b>Molecular Family</b>	Nuclear Markers, TCRs
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Mao CD, <i>et al.</i> 2011. <i>Crit. Rev. Eukaryot. Gene Expr.</i> 21:207.</li> <li>2. Germar K, <i>et al.</i> 2011. <i>P. Natl. Acad. Sci. USA</i> 108:20060.</li> <li>3. Wang R, <i>et al.</i> 2011. <i>J. Immunol.</i> 187:5964.</li> <li>4. Weber BN, <i>et al.</i> 2011. <i>Nature</i> 476:63.</li> <li>5. Jeannet G, <i>et al.</i> 2010. <i>P. Natl. Acad. Sci. USA</i> 107:9777.</li> <li>6. Staal FJ, <i>et al.</i> 1999. <i>Int. Immunol.</i> 11:317.</li> </ol>
<b>Gene ID</b>	<a href="#">6932</a>

## Related Protocols

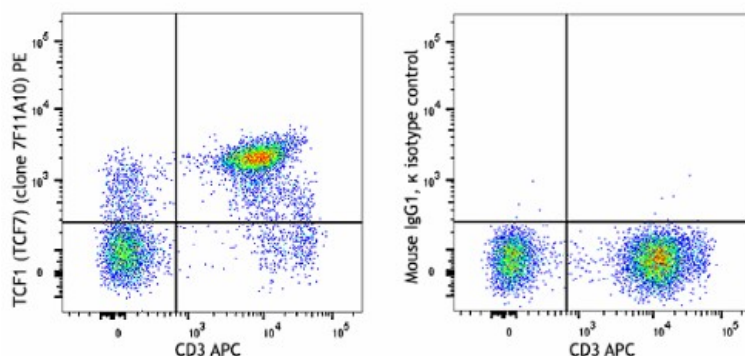
[True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)

[True-Nuclear™ Transcription Factor Staining Protocol for 5mL Tubes](#)

## Other Formats

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

## Product Data



Human peripheral blood lymphocytes were surface stained with CD3 APC and then treated with True-Nuclear™ Transcription Factor Buffer Set. Cells were then stained with TCF1 (TCF7) (clone 7F11A10) PE (left) or mouse IgG1, κ PE isotype control (right).

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