

PE anti-TCF1 (TCF7) Antibody

Catalog# / Size	655207 / 25 tests 655208 / 100 tests
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	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	Lot-specific (to obtain lot-specific concentration and expiration, please enter the lot number in our Certificate of Analysis online tool.)
Storage & Handling	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	Each lot of this antibody is quality control tested by intracellular flow cytometry using our True-Nuclear™ Transcription Factor Staining Protocol . For flow cytometric staining, the suggested use of this reagent is 5 µL per 10 ⁶ cells in 100 µL volume. It is recommended that the reagent be titrated for optimal performance for each application.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Product Citations	<ol style="list-style-type: none"> 1. Ye L, <i>et al.</i> 2022. Cell Metab. 34:595. PubMed 2. Li X, <i>et al.</i> 2023. J Clin Invest. 133: PubMed 3. Ando M, <i>et al.</i> 2021. Cancer Res Commun. 1:41. PubMed 4. Au L, <i>et al.</i> 2021. Cancer Cell. 39:1497. PubMed 5. Braun DA, <i>et al.</i> 2021. Cancer Cell. 39:632. PubMed 6. Mold JE, <i>et al.</i> 2021. Cell Reports. 35(8):109174. PubMed 7. Collins PL <i>et al.</i> 2018. Cell. 176(1-2):348-360. PubMed 8. Liang T, <i>et al.</i> 2022. Front Immunol. 13:985280. PubMed
RRID	AB_2728491 (BioLegend Cat. No. 655207)

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. Jeannet 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

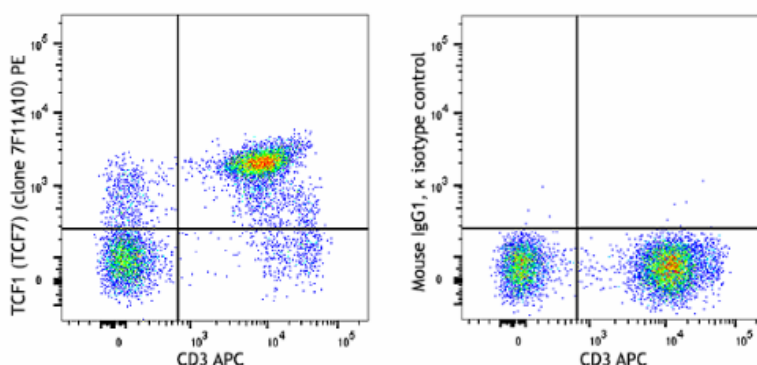
Related Protocols

- [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)

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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