

Brilliant Violet 421™ anti-TCF1 (TCF7) Antibody

Catalog# / Size	655213 / 25 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 Brilliant Violet 421™ 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 10⁶ cells in 100 µL volume. It is highly recommended that the reagent be titrated for optimal performance for each application. Brilliant Violet 421™ excites at 405 nm and emits at 421 nm. The standard bandpass filter 450/50 nm is recommended for detection. Brilliant Violet 421™ is a trademark of Sirigen Group Ltd. Learn more about Brilliant Violet™. This product is subject to proprietary rights of Sirigen Inc. and is made and sold under license from Sirigen Inc. The purchase of this product conveys to the buyer a non-transferable right to use the purchased product for research purposes only. This product may not be resold or incorporated in any manner into another product for resale. Any use for therapeutics or diagnostics is strictly prohibited. This product is covered by U.S. Patent(s), pending patent applications and foreign equivalents.
Excitation Laser	Violet Laser (405 nm)

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 Wntless/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	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

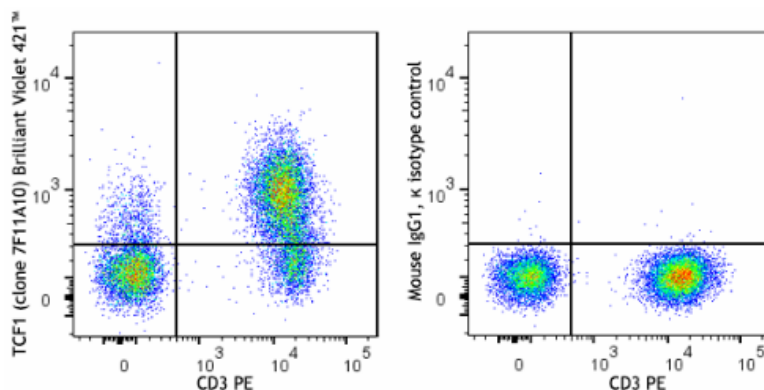
Related Protocols

- [True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)
- [True-Nuclear™ Transcription Factor Staining Protocol for 5mL Tubes](#)

Other Formats

Alexa Fluor® 647 anti-TCF1 (TCF7), PE anti-TCF1 (TCF7), Brilliant Violet 421™ anti-TCF1 (TCF7), TotalSeq™-C1098 anti-TCF1 (TCF7), Purified anti-TCF1 (TCF7), TotalSeq™-B1098 anti-TCF1 (TCF7) Antibody

Product Data



Human peripheral blood mononuclear cells were surface stained with anti-human CD3 (clone UCHT1) PE. Cells were then fixed and permeabilized with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401), and intracellularly stained with anti-TCF1 (TCF7) (clone 7F11A10) Brilliant Violet 421™ (left) or mouse IgG1, κ Brilliant Violet 421™ isotype control (right). Data shown is gated on the lymphocyte population.

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