

PE/Fire™ 744 anti-T-bet Antibody

Catalog# / Size	644847 / 25 tests 644848 / 100 tests
Clone	4B10
Regulatory Status	RUO
Other Names	T-box expressed in T cells, T box 21, TBLYM
Isotype	Mouse IgG1, κ
Description	T-bet, also known as T-box transcription factor T-bet, is considered to be a "master regulator" of Th1 lymphoid development controlling the production of the cytokine IFN-γ. T-bet is widely expressed in hematopoietic cells including stem cells, NK cells, B cells, and T cells. T-bet is critical for the control of microbial pathogens, and knockout animals show multiple physiologic and inflammatory features characteristic of asthma. T-bet expression is optimally observed after IL-12 stimulation and can be suppressed by addition of the Th2 cytokine IL-4 or neutralization of IL-12.

Product Details

Verified Reactivity	Human, Mouse
Antibody Type	Monoclonal
Host Species	Mouse
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/Fire™ 744 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. True-Stain Monocyte Blocker™ (Cat No. 426102) is recommended to minimize non-specific staining of PE/Fire™ 744 on monocytes and macrophages. * PE/Fire™ 744 has a maximum excitation of 565 nm and a maximum emission of 744 nm.
Excitation Laser	Blue Laser (488 nm) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation² and immunofluorescence microscopy³. NOTE: For flow cytometric staining with this clone, True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) offers improved staining and is highly recommended over the Foxp3 Fix/Perm Buffer Set (Cat. No. 421403) and the Nuclear Factor Fixation and Permeabilization Buffer Set (Cat. No. 422601).

Application References

(PubMed link indicates BioLegend citation)

1. Szabo SJ, *et al.* 2000. *Cell* 100:655. (ICFC, WB)

2. Hwang ES, *et al.* 2005. *J. Exp. Med.* 202:1289. (ICFC, WB, IP)

3. Neurath MF, *et al.* 2002. *J. Exp. Med.* 195:1129. (IF)

4. Hsieh CY, *et al.* 2012. *J Pharmacol Exp.* 343:125. [PubMed](#).

Antigen Details

Structure	T-box transcription factor, approximately 58 kD.
Distribution	Nuclear; expressed in T cells, hematopoietic stem cells, NK cells, B cells, lung, spleen.
Function	Th1-specific T-box transcription factor controlling expression of the hallmark Th1 cytokine, interferon gamma (IFN-γ). T-bet expression is critical for the control of microbial pathogens.
Cell Type	B cells, Hematopoietic stem and progenitors, NK cells, T cells, Tregs
Biology Area	Cell Biology, Immunology, Transcription Factors
Molecular Family	Nuclear Markers
Antigen References	1. Szabo SJ, <i>et al.</i> 2000. <i>Cell</i> 100:655. 2. Szabo SJ, <i>et al.</i> 2002. <i>Science</i> 295:338. 3. Finotto S, <i>et al.</i> 2002. <i>Science</i> 295:336. 4. Mullen AC, <i>et al.</i> 2001. <i>Science</i> 292:1907.
Gene ID	30009

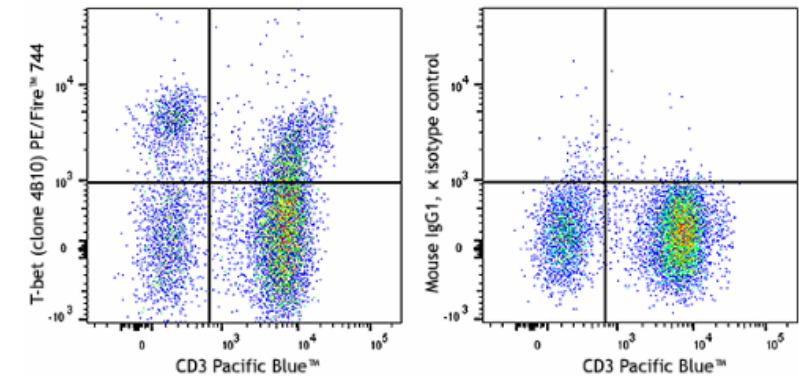
Related Protocols

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

Other Formats

PE/Fire™ 810 anti-T-bet, Purified anti-T-bet (Maxpar® Ready), PE/Dazzle™ 594 anti-T-bet, Alexa Fluor® 488 anti-T-bet, Brilliant Violet 785™ anti-T-bet, PerCP/Cyanine5.5 anti-T-bet, Purified anti-T-bet, FITC anti-T-bet, APC anti-T-bet, Alexa Fluor® 647 anti-T-bet, Pacific Blue™ anti-T-bet, PE/Cyanine7 anti-T-bet, PE/Cyanine5 anti-T-bet, TotalSeq™-B1001 anti-T-bet Antibody, PE/Fire™ 744 anti-T-bet, PE anti-T-bet, Brilliant Violet 421™ anti-T-bet, Brilliant Violet 605™ anti-T-bet, Brilliant Violet 711™ anti-T-bet, Alexa Fluor® 594 anti-T-bet, KIRAVIA Blue 520™ anti-T-bet

Product Data



Human peripheral blood lymphocytes were surface stained with anti-human CD3 (clone UCHT1) Pacific Blue™. Cells were then treated with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) and intracellularly stained with anti-T-bet (clone 4B10) PE/Fire™ 744 (left) or mouse IgG1, κ PE/Fire™ 744 isotype control (right).

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