

FITC anti-T-bet Antibody

Catalog# / Size	644811 / 25 µg 644812 / 100 µg
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.
Preparation	The antibody was purified by affinity chromatography, and conjugated with FITC under optimal conditions.
Concentration	0.5 mg/ml
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 immunofluorescent staining using our True-Nuclear™ Transcription Factor Staining Protocol . For flow cytometric staining, the suggested use of this reagent is ≤ 1.0 µg 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)
Application Notes	Additional reported applications (for the relevant formats) include: immunoprecipitation ² and immunofluorescence microscopy ³ . 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](#).

Product Citations

1. Smith C, *et al.* 2012. *Blood.* 120:3237. [PubMed](#)
2. Demers K, *et al.* 2016. *PLoS Pathog.* 12: 1005805. [PubMed](#)
3. Lu Y, *et al.* 2020. *Cell.* 180(6):1081-1097. [PubMed](#)
4. Dayoub O, *et al.* 2017. *Sci Rep.* 10.1038/s41598-017-09933-4. [PubMed](#)
5. Islas-Vazquez L, *et al.* 2020. *Biology (Basel).* 9:00. [PubMed](#)

6. Blom L, *et al.* 2011. PLoS One. 6:e21695. [PubMed](#)
7. Bhattacharya P, *et al.* 2020. Elife. 9:00. [PubMed](#)
8. Okamoto Y, *et al.* 2013. Int Immunopharmacol. 17:140. [PubMed](#)
9. Hoffmann M, *et al.* 2016. PLoS Pathog. 12: 1005661. [PubMed](#)
10. Ostadkarampour M, *et al.* 2016. PLoS One. 11:e0164751. [PubMed](#)
11. Naluyima P, *et al.* 2019. J Immunol. 203:2210. [PubMed](#)
12. Li X, *et al.* 2021. Front Cell Dev Biol. 9:647713. [PubMed](#)

RRID AB_2287097 (BioLegend Cat. No. 644811)
 AB_2200540 (BioLegend Cat. No. 644812)

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	<ol style="list-style-type: none"> 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

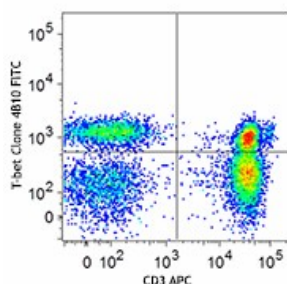
[True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)

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

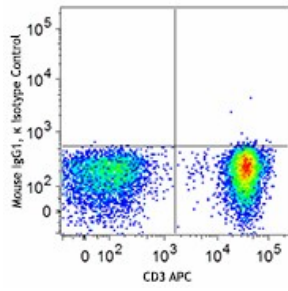
Other Formats

APC anti-T-bet, Purified anti-T-bet, Alexa Fluor® 647 anti-T-bet, PerCP/Cyanine5.5 anti-T-bet, Pacific Blue™ anti-T-bet, PE anti-T-bet, Brilliant Violet 711™ anti-T-bet, FITC anti-T-bet, Brilliant Violet 421™ anti-T-bet, Brilliant Violet 605™ anti-T-bet, PE/Cyanine7 anti-T-bet, PE/Dazzle™ 594 anti-T-bet, Purified anti-T-bet (Maxpar® Ready), Alexa Fluor® 488 anti-T-bet, Direct-Blot™ HRP anti-T-bet, Brilliant Violet 785™ 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 CD3 APC and then treated with True-Nuclear™ Transcription Factor Buffer Set (Cat# 424401). Cells were then stained with T-bet (clone 4B10) FITC (top) or mouse IgG1, κ FITC isotype control (bottom).



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