

## PE/Cyanine7 anti-T-bet Antibody

<b>Catalog# / Size</b>	644823 / 25 µg 644824 / 100 µg
<b>Clone</b>	4B10
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	T-box expressed in T cells, T box 21, TBLYM
<b>Isotype</b>	Mouse IgG1, κ
<b>Description</b>	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

<b>Verified Reactivity</b>	Human, Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Mouse
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography and conjugated with PE/Cyanine7 under optimal conditions.
<b>Concentration</b>	0.2 mg/ml
<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 immunofluorescent staining using our <a href="#">True-Nuclear™ Transcription Factor Staining Protocol</a> . For flow cytometric staining, the suggested use of this reagent is ≤0.25 µg per million cells in 100 µl 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>Application Notes</b>	Additional reported applications (for the relevant formats) include: immunoprecipitation <sup>2</sup> and immunofluorescence microscopy <sup>3</sup> .  <b>NOTE:</b> For flow cytometric staining with this clone, True-Nuclear™ Transcription Factor Buffer Set (Cat. No. <a href="#">424401</a> ) 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).
<b>Additional Product Notes</b>	BioLegend is in the process of converting the name PE/Cy7 to PE/Cyanine7. The dye molecule remains the same, so you should expect the same quality and performance from our PE/Cyanine7 products. Please contact <a href="#">Technical Service</a> if you have any questions.
<b>Application References</b>	1. Szabo SJ, <i>et al.</i> 2000. <i>Cell</i> 100:655. (ICFC, WB) 2. Hwang ES, <i>et al.</i> 2005. <i>J. Exp. Med.</i> 202:1289. (ICFC, WB, IP) 3. Neurath MF, <i>et al.</i> 2002. <i>J. Exp. Med.</i> 195:1129. (IF) 4. Hsieh CY, <i>et al.</i> 2012. <i>J Pharmacol Exp.</i> 343:125. <a href="#">PubMed</a> .
<b>(PubMed link indicates BioLegend citation)</b>	
<b>Product Citations</b>	

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**RRID** AB\_2561760 (BioLegend Cat. No. 644823)  
 AB\_2561761 (BioLegend Cat. No. 644824)

## Antigen Details

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<b>Structure</b>	T-box transcription factor, approximately 58 kD.
<b>Distribution</b>	Nuclear; expressed in T cells, hematopoietic stem cells, NK cells, B cells, lung, spleen.
<b>Function</b>	Th1-specific T-box transcription factor controlling expression of the hallmark Th1 cytokine, interferon gamma (IFN- $\gamma$ ). T-bet expression is critical for the control of microbial pathogens.
<b>Cell Type</b>	B cells, Hematopoietic stem and progenitors, NK cells, T cells, Tregs
<b>Biology Area</b>	Cell Biology, Immunology, Transcription Factors
<b>Molecular Family</b>	Nuclear Markers
<b>Antigen References</b>	<ol style="list-style-type: none"> <li>1. Szabo SJ, <i>et al.</i> 2000. <i>Cell</i> 100:655.</li> <li>2. Szabo SJ, <i>et al.</i> 2002. <i>Science</i> 295:338.</li> <li>3. Finotto S, <i>et al.</i> 2002. <i>Science</i> 295:336.</li> <li>4. Mullen AC, <i>et al.</i> 2001. <i>Science</i> 292:1907.</li> </ol>
<b>Gene ID</b>	<a href="#">30009</a>

## Related Protocols

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

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

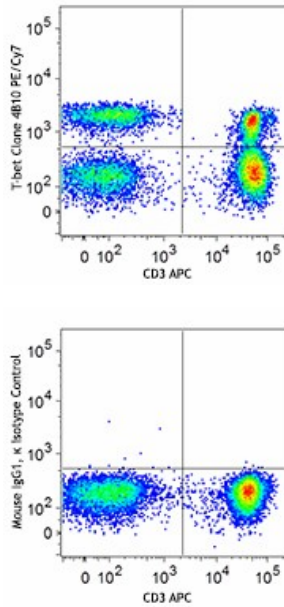
## Other Formats

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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

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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) PE/Cyanine7 (top) or mouse IgG1, κ PE/Cyanine7 isotype control (bottom).

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