# SONY

# Product Data Sheet

## Purified anti-T-bet

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| **Catalog # / Size:** | 3824010 / 100 µg |
| | 3824005 / 25 µg |
| **Clone:** | 4B10 |
| **Isotype:** | Mouse IgG1, κ |
| **Reactivity:** | Human,Mouse |
| **Preparation:** | The antibody was purified by affinity chromatography. |
| **Formulation:** | Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide. |
| **Concentration:** | 0.5 |
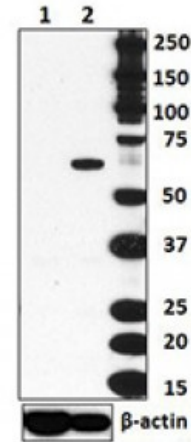


Total cell lysate from PBMC (lane 1, 15 microg) and PBMC treated with 5 microg/mL CD3 and 2 microg/mL CD28 (lane 2, 15 microg) were resolved by electrophoresis (4-12% Bis-Tris), transferred to nitrocellulose, and probed with purified anti-T-bet a

## Applications:

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| **Applications:** | Other |
| **Recommended Usage:** | Each lot of this antibody is quality control tested . For Western blotting, the suggested use is 1 to 2 ug per ml. For flow cytometric staining, the suggested use of this reagent is 1.0 microg per million cells in a staining volume of 100 microL. It is recommended that the reagent be titrated for optimal performance for each application. |
| **Application Notes:** | Additional reported applications (for the relevant formats) include: immunoprecipitation2 and immunofluorescence microscopy3.<br><br>**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). |
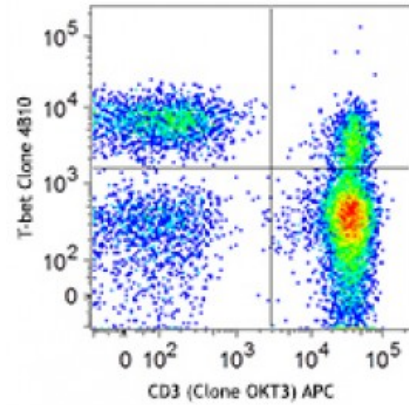


Human peripheral blood lymphocytes were surface stained with CD3 (clone OKT3) APC and then treated with True-Nuclear™ Transcription Factor Buffer Set. The cells were then stained with purified T-bet (clone 4B10) followed by anti-mouse IgG1 PE.

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| **Application References:** | 1. Szabo SJ, *et al.* 2000. *Cell* 100:655. (ICFC, WB)<br>2. Hwang ES, *et al.* 2005. *J. Exp. Med.* 202:1289. (ICFC, WB, IP)<br>3. Neurath MF, *et al.* 2002. *J. Exp. Med.* 195:1129. (IF) |

4. Hsieh CY, *et al.* 2012. *J Pharmacol Exp.* 343:125. <u>PubMed.</u>

**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.

**Antigen References:**
1. Szabo SJ, *et al.* 2000. *Cell* 100:655.
2. Szabo SJ, *et al.* 2002. *Science* 295:338.
3. Finotto S, *et al.* 2002. *Science* 295:336.
4. Mullen AC, *et al.* 2001. *Science* 292