

PE anti-mouse/human TOX Antibody

Catalog# / Size	377122 / 25 µg 377123 / 100 µg
Clone	W17072A
Regulatory Status	RUO
Other Names	Thymocyte Selection-Associated High Mobility Group Box, Thymus High Mobility Group
Isotype	Rat IgG1, κ
Description	TOX, a member of the high-mobility group (HMG) box superfamily of DNA-binding proteins, was originally identified as a thymic transcript expressed in CD4 ⁺ CD8 ⁺ double-positive T cells. Along with TOX2, TOX3, and TOX4, TOX is also part of a small subfamily of transcription factors that share conserved HMG-box sequences. TOX is highly upregulated in thymocytes undergoing positive selection and is required for the differentiation and development of various T cell subsets, including CD4 ⁺ T cells, regulatory T cells, and natural killer T cells (NKTs). TOX-deficient mice fail to develop lymph nodes and have significantly diminished numbers of CD4 ⁺ T, NK, and ILC cells.

Product Details

Verified Reactivity	Mouse, Human
Antibody Type	Monoclonal
Host Species	Rat
Immunogen	Mouse TOX recombinant protein (21-236 a.a.)
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Preparation	The antibody was purified by affinity chromatography and conjugated with PE under optimal conditions.
Concentration	0.2 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 with flow cytometric analysis . For flow cytometric staining, the suggested use of this reagent is ≤ 1.0 µg per million 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) Green Laser (532 nm)/Yellow-Green Laser (561 nm)
Application Notes	Use of True-Nuclear™ Transcription Factor or True-Phos™ Perm Buffer are recommended for TOX detection with clone W17072A Clone W17072A does not block the staining of reference clones TXRX10, REA473 and NAN448B tested.

Antigen Details

Structure	562 amino acids with a predicted molecular weight of 57.5 kD. Contains a high mobility group (HMG) box domain responsible for DNA binding.
Distribution	Nucleus
Function	TOX is a transcription factor required for the development of various T lymphocyte subsets.
Interaction	TOX interacts with ZDHHC17
Biology Area	Transcription Factors

Antigen References

1. Spits H. 2015. *Nat Immunol.* 16:594.
2. Seehus CR, et al. 2015. *Nat Immunol.* 16:599.
3. Huang Y, et al. 2015. *Blood.* 125:1435.
4. Aliahmad P, et al. 2012. *Curr Opin Immunol.* 24:173.
5. Di Santo JP. 2010. *Nat Immunol.* 11:885.
6. Aliahmad P, et al. 2004. *J Exp Med.* 199:1089.

Gene ID [252838](#)

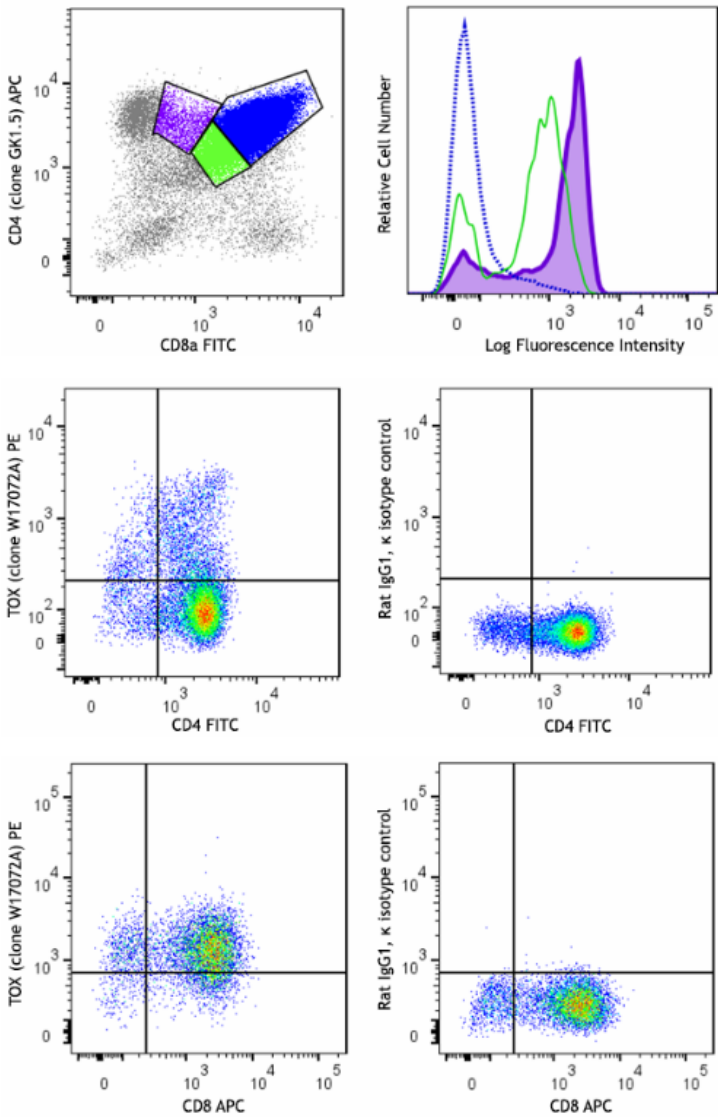
Related Protocols

- [Intracellular Flow Cytometry Staining Protocol](#)

Other Formats

Purified anti-mouse/human TOX, PE anti-mouse/human TOX

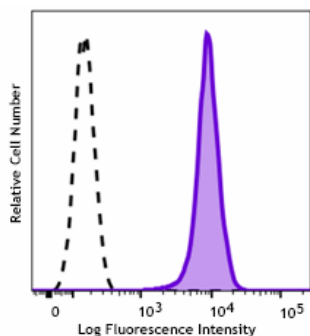
Product Data



C57BL/6 mouse thymocytes were surface stained with anti-mouse CD4 (clone GK1.5) APC and anti-mouse CD8a (clone S18018E) FITC. Cells were then fixed and permeabilized with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) and intracellularly stained with anti-mouse/human TOX (clone W17072A) PE. TOX staining of CD4⁺CD8⁺ (blue), CD4^{lo}CD8^{lo} (green), and CD4⁺CD8^{lo} (purple) thymocytes (left) is shown in color matched histograms (right). Cells in the lymphocyte gate were used for analysis.

C57BL/6 mouse thymocytes were surface stained with anti-mouse CD4 (clone GK1.5) FITC. Cells were then fixed and permeabilized with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) and intracellularly stained with anti-mouse/human TOX (clone W17072A) PE (left) or rat IgG1, κ PE isotype control (right).

Human CD8⁺ memory T cells were isolated using MojoSort™ Human CD8 Memory T Cell Isolation Kit (Cat. No. 480065) and cultured with Human CD3/CD28 T Cell Activation Beads (Cat. No. 422603) and Recombinant Human IL-2 (Cat. No. 581102) for 5 days. Cells were surface stained with anti-human CD8 (clone SK1) APC, then fixed and permeabilized with True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) and intracellularly stained with anti-mouse/human TOX (clone W17072A) PE (left) or rat IgG1, κ PE isotype control (right).



MOLT-4 (human T-lymphoblastic leukemia cell line) cells were fixed and permeabilized using the True-Nuclear™ Transcription Factor Buffer Set (Cat. No. 424401) and intracellularly stained with anti-mouse/human TOX (clone W17072A) PE (filled histogram), or rat IgG1, κ PE isotype control (open histogram).

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8999 BioLegend Way, San Diego, CA 92121 www.biolegend.com
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587