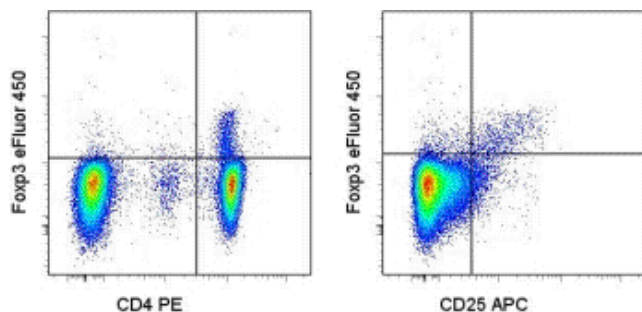


Anti-Human Foxp3 eFluor® 450

Catalog Number: 48-4776

Also Known As: Forkhead Box P3, Scurfin, JM2, Treg

RUO: For Research Use Only. Not for use in diagnostic procedures.



Surface staining of normal human peripheral blood cells with Anti-Human CD4 PE (cat. 12-0049) (left) or Anti-Human CD25 APC (cat. 17-0259) (right) followed by fixation and permeabilization with the Foxp3 Staining Buffers (cat. 00-5523) and intracellular staining with Anti-Human Foxp3 eFluor® 450. Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human Foxp3 eFluor® 450

REF **Catalog Number:** 48-4776

Clone: PCH101

Concentration: 5 µL (0.5 µg)/test

Host/Isotype: Rat IgG2a, kappa

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer

 **Temperature Limitation:** Store at 2-8°C. Do not freeze. Light sensitive material.

LOT **Batch Code:** Refer to Vial

 **Use By:** Refer to Vial

Description

eBioscience offers a panel of monoclonal antibodies to different epitopes of human Foxp3, providing useful tools for investigating the complete expression pattern of Foxp3 at the protein level, and discerning the precise subsets of Foxp3⁺ cells. Please contact tech@ebioscience.com or 888.810.6168 for any additional assistance.

The PCH101 antibody reacts with the amino terminus of human foxp3 protein also known as FORKHEAD BOX P3, SCURFIN, and JM2; cross reactivity of this antibody to other proteins has not been determined. Foxp3, a 49-55 kDa protein, is a member of the forkhead/winged-helix family of transcriptional regulators, and was identified as the gene defective in 'scurfy' (sf) mice. Constitutive high expression of Foxp3 mRNA has been shown in CD4+CD25+ regulatory T cells (Treg cells), and ectopic expression of foxp3 in CD4+CD25- cells imparts a Treg phenotype in these cells.

Intracellular staining of human peripheral blood mononuclear cells (PBMCs) with PCH101 antibody using the anti-human Foxp3 Staining Set and protocol reveals approximately 0.5-4% of lymphocytes staining, with the majority of staining occurring in the CD25^{bright} population. This is subject to donor variability.

PCH101 crossreacts with rhesus, chimpanzee and cynomolgus. We recommend the use of CD4 (OKT4, cat. 11-0048, or RPA-T4, cat. 11-0049, depending on the species) and CD25 (BC96, cat. 17-0259).

Applications Reported

This PCH101 antibody has been reported for use in intracellular staining followed by flow cytometric analysis.

Applications Tested

This PCH101 antibody has been pre-titrated and tested by intracellular staining and by flow cytometric analysis using the Foxp3 Staining Buffer Set (cat. 00-5523) and protocol. Please see Best Protocols Section (Staining Intracellular Antigens for Flow Cytometry) for staining protocol (refer to Protocol B: One-step protocol for intracellular (nuclear) proteins). This antibody can be used at 5 µl (0.5 µg)/per test. A test is defined as the amount (µg)/test of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10⁵ to 10⁸ cells/test.

eFluor™ 450 is a replacement for Pacific Blue®. eFluor™ 450 emits at 456 nm and is excited with the Violet laser (405 nm). Please make sure that your instrument is capable of detecting this fluorochrome.

References

Bell MP, Svingsen PA, Rahman MK, Xiong Y, Faubion WA Jr. FOXP3 regulates TLR10 expression in human T regulatory cells. J Immunol. 2007 Aug 1;179(3):1893-900. (**PCH101**, ChIP assay, PubMed)

Clark RA, Kupper TS. IL-15 and dermal fibroblasts induce proliferation of natural regulatory cells isolated from human skin. *Blood*. 2007 Jan 1;109(1):194-202. (**PCH101**, IHC frozen, PubMed)

Epple HJ, Loddenkemper C, Kunkel D, Tröger H, Maul J, Moos V, Berg E, Ullrich R, Schulzke JD, Stein H, Duchmann R, Zeitz M, Schneider T. Mucosal but not peripheral FOXP3+ regulatory T cells are highly increased in untreated HIV infection and normalize after suppressive HAART. *Blood*. 2006 Nov 1;108(9):3072-8. **PCH101**, IHC paraffin, PubMed)

Manigold T, Shin EC, Mizukoshi E, Mihalik K, Murthy KK, Rice CM, Piccirillo CA, Rehermann B. Foxp3+CD4+CD25+ T cells control virus-specific memory T cells in chimpanzees recovered from Hepatitis C. *Blood*. 2006 Jun 1;107(11):4424-32. (**PCH101** in chimpanzee, PubMed)

Ahmadzadeh M, Rosenberg SA. IL-2 Administration Increases CD4+CD25hiFoxp3+ Regulatory T Cells in Cancer Patients. *Blood*. 2006 Mar 15;107(6):2409-14. (**PCH101**, IC Flow, PubMed)

Hartwig UF, Nonn M, Khan S, Meyer RG, Huber C, Herr W. Depletion of alloreactive T cells via CD69: implications on antiviral, antileukemic and immunoregulatory T lymphocytes. *Bone Marrow Transplant*. 2006 Feb;37(3):297-305. (**PCH101**, IC Flow, PubMed)

Crellin NK, Garcia RV, Hadisfar O, Allan SE, Steiner TS, Levings MK. Human CD4+ T Cells Express TLR5 and Its Ligand Flagellin Enhances the Suppressive Capacity and Expression of FOXP3 in CD4+CD25+ T Regulatory Cells. *J Immunol*. 2005 Dec 15;175(12):8051-9. (**PCH101**, IC Flow, PubMed)

Lim, H.W., P. Hillsamer, A.H. Banham, and C.H. Kim. 2005. Cutting Edge: Direct Suppression of B cells by CD4+CD25+ Regulatory T cells. *J Immunol*. 2005 Oct 1;175(7):4180-3. (**PCH101**, IC Flow, PubMed)

Manavalan JS, Kim-Schulze S, Scotto L, Naiyer AJ, Vlad G, Colombo PC, Marboe C, Mancini D, Cortesini R, Suci-Foca N. Alloantigen specific CD8+CD28- FOXP3+ T suppressor cells induce ILT3+ ILT4+ tolerogenic endothelial cells, inhibiting alloreactivity. *Int Immunol*. 2004 Aug;16(8):1055-68.

Takahata Y, Nomura A, Takada H, Ohga S, Furuno K, Hikino S, Nakayama H, Sakaguchi S, Hara T. CD25+CD4+ T cells in human cord blood: an immunoregulatory subset with naïve phenotype and specific expression of forkhead box p3 (Foxp3) gene. *Exp Hematol*. 2004 Jul;32(7):622-9.

Sakaguchi S. 2003. The origin of FOXP3-expressing CD4+ regulatory T cells: thymus or periphery. *J Clin Invest*. 2003 November 1; 112(9): 1310–1312.

Hori S, Nomura T, Sakaguchi S. Control of regulatory T cell development by the transcription factor Foxp3. *Science*. 2003 Feb 14;299(5609):1057-61.

Related Products

00-5523 Foxp3 / Transcription Factor Staining Buffer Set

11-0049 Anti-Human CD4 FITC (RPA-T4)

12-0049 Anti-Human CD4 PE (RPA-T4)

12-0259 Anti-Human CD25 PE (BC96)

17-0259 Anti-Human CD25 APC (BC96)

48-4777 Anti-Human Foxp3 eFluor® 450 (236A/E7)

48-5773 Anti-Mouse/Rat Foxp3 eFluor® 450 (FJK-16s)

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