

True-Nuclear™ One Step Staining Human Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP)

Catalog# / Size	320127 / 25 tests
Clone	206D
Regulatory Status	RUO
Other Names	Forkhead box protein P3, Scurfin, JM2, IPEX, Zinc finger protein JM2
Isotype	Mouse IgG1, κ
Description	FOXP3 is a 50-55 kD transcription factor, also known as Forkhead box protein P3, Scurfin, JM2, or IPEX. It is proposed to be a master regulatory gene and more specific marker of T regulatory cells than most cell surface markers (such as CD4 and CD25). Transduced expression of FOXP3 in CD4 ⁺ /CD25 ⁻ cells has been shown to induce GITR, CD103, and CTLA4 and impart a T regulatory cell phenotype. FOXP3 is mutated in X-linked autoimmunity-allergic dysregulation syndrome (XLAAD or IPEX) in humans and in "scurfy" mice. Overexpression of FOXP3 has been shown to lead to a hypoactive immune state suggesting that this transcriptional factor is a central regulator of T cell activity. In human, unlike in mouse, two isoforms of FOXP3 have been reported: one (FOXP3) corresponding to the canonical full-length sequence; the other (FOXP3 δ2) lacking exon 2. The 206D antibody recognizes human FOXP3 epitope in the region of amino acids 105-235.

Product Details

Verified Reactivity	Human
Reported Reactivity	Baboon, Cynomolgus, Rhesus, Pigtailed Macaque
Antibody Type	Monoclonal
Host Species	Mouse
Immunogen	Full-length FOXP3 protein
Concentration	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our Concentration and Expiration Lookup or Certificate of Analysis online tools.)
Storage & Handling	This kit is guaranteed for six months. Upon receipt, store between 2°C and 8°C, and protected from prolonged exposure to light. Do not freeze.
Application	ICFC - Quality tested
Recommended Usage	<p>Materials Provided:</p> <ol style="list-style-type: none"> Alexa Fluor® 488 anti-human FOXP3/CD25 PE/CD4 PerCP antibody cocktail - 25 tests Alexa Fluor® 488 Mouse IgG1, κ isotype control/CD25 PE/CD4 PerCP antibody cocktail - 25 tests True-Nuclear™ Transcription Buffer Set - 120 tests (Cat. No. 424401) <p>Materials not included:</p> <ol style="list-style-type: none"> Cell Staining Buffer (Cat. No. 420201) Single Color Compensation Controls <p>Immunofluorescence Staining Procedures:</p> <ol style="list-style-type: none"> Aliquot 100 µL of target cells to each tube. Add 1 mL of the Transcription Factor 1X Fix solution to each tube, vortex, and incubate at room temperature in the dark for 30-60 minutes. Without washing, add 2 mL of the Transcription Factor 1X Perm Buffer to each tube. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant. Add 2 mL of the Transcription Factor 1X Perm Buffer to each tube. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant. Resuspend the cell pellet in 100 µL of the Transcription Factor 1X Perm Buffer. Add 20 µL of Alexa Fluor® 488 anti-human FOXP3/CD25 PE/CD4 PerCP antibody cocktail or 20 µL of Alexa Fluor® 488 mouse IgG1, κ isotype control/CD25 PE/CD4 PerCP antibody cocktail into

- the appropriate tubes. Incubate in the dark at room temperature for at least 30 minutes.
9. Add 2 mL of the Transcription Factor 1X Perm Buffer to each tube.
10. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant.
11. Add 2 mL of the cell staining buffer.
12. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant.
13. Resuspend in 0.5 mL cell staining buffer and then acquire tubes on a flow cytometer.

Caution: The True-Nuclear™ Transcription Factor Buffer Set contains paraformaldehyde, which is toxic and mutagenic. Please handle with caution. Wear gloves, lab coats, and necessary protection to avoid direct contact.

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/Perm Buffer Set (Cat. No. 421403) and the Nuclear Factor Fixation and Permeabilization Buffer Set (Cat. No. 422601).

Application Notes

Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections¹ and formalin-fixed paraffin-embedded sections^{1, 8, 19-20}, and Western blotting¹. The binding of 206D to FOXP3 can be partially blocked by 259D, but 206D does not show significant blocking effect on 259D binding.

NOTE: For flow cytometric staining with this clone, True-Nuclear™ Transcription Factor Buffer Set (Cat. No. [424401](#)) offers improved staining and is highly recommended.

Application References

(PubMed link indicates BioLegend citation)

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2. Yang ZZ, et al. 2006. *Blood* 107:3639.
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5. Bell MP, et al. 2007. *J. Immunol.* 179:1893.
6. Tran DQ, et al. 2007. *Blood* doi:10.1182/blood-2007-06-094656. [PubMed](#)
7. Gao Q, et al. 2007. *J Clin Oncol.* 25:2586. (IHC) [PubMed](#)
8. Pillai V, et al. 2008. *Blood* 111:463. [PubMed](#)
9. Zheng Y, et al. 2008. *J. Immunol.* 181:1683. [PubMed](#)
10. Zonios DI, et al. 2008. *Blood* 112:287. [PubMed](#)
11. Kavanagh B, et al. 2008. *Blood.* [PubMed](#)
12. Nevala WK, et al. 2009. *Clin Cancer Res.* 15:1931. [PubMed](#)
13. Grant J, et al. 2009. *Cytometry B Clin Cytom.* 76:69. [PubMed](#)
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15. Kmiecik M, et al. 2009. *J. Transl. Med.* 7:89. (ICFC) [PubMed](#)
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17. Raghaven S, et al. 2009. *Ann Rheum Dis.* 68:1908. [PubMed](#)
18. Hodi FS, et al. 2014. *Cancer Immunol Res.* 2:632. (IHC) [PubMed](#)
19. Szoros E, et al. 2015. *Clin Cancer Res.* 21:2840. (IHC) [PubMed](#)

Product Citations

1. Park S, et al. 2016. *Proc Natl Acad Sci U S A.* 113(52):E8379-E8386. [PubMed](#)

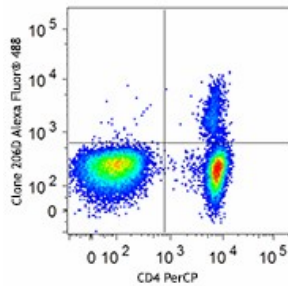
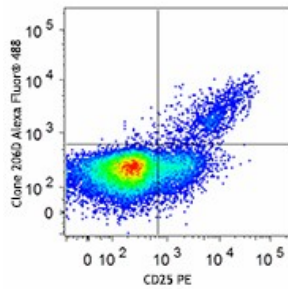
Antigen Details

Structure	Forkhead/winged-helix transcription factor family, approximately 50 kD, contains zinc finger and forkhead domains
Distribution	Nuclear; expressed in T regulatory cells
Function	Transcription factor proposed to be a master regulatory gene in T regulatory cell development and a critical factor for immune homeostasis
Interaction	Interacts with DNA
Cell Type	Tregs
Biology Area	Cell Biology, Immunology, Transcription Factors
Molecular Family	CD Molecules, Nuclear Markers
Antigen References	<ol style="list-style-type: none"> 1. Hori S, et al. 2003. <i>Science</i> 299:1057. 2. Gandhi R, et al. 2010. <i>Nat. Immunol.</i> 11:846.
Regulation	FOXP3 is present at high levels in T regulatory cells, it can also be induced by T cell activation.
Gene ID	50943 50943 20371 317382

Other Formats

Purified anti-human FOXP3, Alexa Fluor® 488 anti-human FOXP3, Alexa Fluor® 647 anti-human FOXP3, FITC anti-human FOXP3, Pacific Blue™ anti-human FOXP3, PE anti-human FOXP3, PE/Dazzle™ 594 anti-human FOXP3, True-Nuclear™ One Step Staining Human Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP), Brilliant Violet 421™ anti-human FOXP3, KIRAVIA Blue 520™ anti-human FOXP3, Spark NIR™ 685 anti-human FOXP3 Antibody

Product Data



Human peripheral blood lymphocytes were stained with True-Nuclear™ One Step Staining Human Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP).

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