

Pacific Blue™ anti-human FOXP3 Antibody

Catalog# / Size	320115 / 25 tests 320116 / 100 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
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and BSA (origin USA)
Preparation	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
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	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 flow cytometry using our True-Nuclear™ Transcription Factor Staining Protocol . For flow cytometric staining, the suggested use of this reagent is 5 µl per 10 ⁶ cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application. * Pacific Blue™ has a maximum emission of 455 nm when it is excited at 405 nm. Prior to using Pacific Blue™ conjugate for flow cytometric analysis, please verify your flow cytometer's capability of exciting and detecting the fluorochrome. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Violet Laser (405 nm)
Application Notes	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen sections ¹ and formalin-fixed paraffin-embedded sections ^{1,8,19-20} , and Western blotting ¹ . 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

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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](#)
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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](#)
14. Nigam P, *et al.* 2010. *J. Immunol.* 184:1690. [PubMed](#)
15. Kmiecik M, *et al.* 2009. *J. Transl. Med.* 7:89. (ICFC) [PubMed](#)
16. Hartigan-O'Connor DJ,*et al.*2007.*J Exp Med.*204:2679. [PubMed](#)
17. Raghavan S, *et al.* 2009. *Ann Rheum Dis.* 68:1908. [PubMed](#)
18. Hodi FS, *et al.* 2014. *Cancer Immunol Res.* 2:632.(IHC) [PubMed](#)
19. Sziros E, *et al.* 2015. *Clin Cancer Res.* 21:2840.(IHC) [PubMed](#)

Product Citations

1. Jin J, *et al.* 2014. *PLoS One.* 9:104753. [PubMed](#)
2. Ardeshir A, *et al.* 2014. *Sci Transl Med.* 6:252. [PubMed](#)
3. Ostadkarampour M, *et al.* 2016. *PLoS One.* 11:e0164751. [PubMed](#)
4. Amodio D, *et al.* 2018. *J Immunol.* 200:538. [PubMed](#)
5. Klughammer J, *et al.* 2018. *Nat Med.* 24:1611. [PubMed](#)
6. Hartigan-O'Connor D, *et al.* 2007. *J Exp Med.* 204:2679. [PubMed](#)
7. Raghavan S, *et al.* 2009. *Ann Rheum Dis.* 68:1908. [PubMed](#)
8. Purvis H, *et al.* 2010. *Blood.* 116:4829. [PubMed](#)

RRID

AB_439800 (BioLegend Cat. No. 320115)
AB_439801 (BioLegend Cat. No. 320116)

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	Nuclear Markers
Antigen References	1. Hori S, <i>et al.</i> 2003. <i>Science</i> 299:1057. 2. Gandhi R, <i>et al.</i> 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

Related Protocols

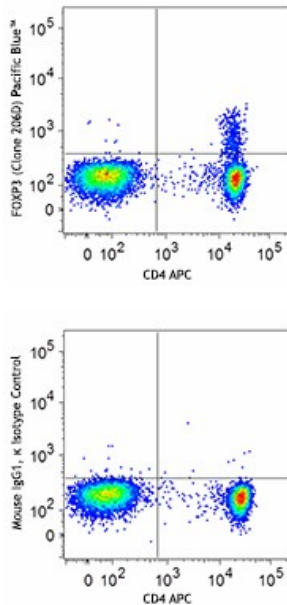
[True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)

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

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 surface stained with CD4 APC and then treated with True-Nuclear™ Transcription Factor Buffer Set. Cells were then stained with FOXP3 (clone 206D) Pacific Blue™ (top) or mouse IgG1, κ Pacific Blue™ isotype control (bottom).

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