

PE anti-human FOXP3 Antibody

| | |
|--------------------------|--|
| Catalog# / Size | 320207 / 25 tests 320208 / 100 tests |
| Clone | 259D |
| 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 δ 2) lacking exon 2. The 259D antibody recognizes human FOXP3 epitope in the region of amino acids 105-235. |

Product Details

| | |
|-------------------------------|---|
| Verified Reactivity | Human |
| Reported Reactivity | Cynomolgus, Rhesus, Baboon, Chimpanzee |
| 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 PE 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 . Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 μ l staining 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 | Additional reported applications (for the relevant formats) include: Western blotting ¹ , and immunohistochemical staining ¹ of acetone-fixed frozen sections and formalin-fixed paraffin-embedded sections. The 259D antibody gives strong positivity on paraffin and frozen sections and the antibody stains some epithelial cells. 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)

1. Roncador G, *et al.* 2005 *Eur. J. Immunol.* 35:1681.
2. Yang ZZ, *et al.* 2006. *Blood* 107:3639. [PubMed](#)
3. Gavin MA, *et al.* 2006. *P. Natl. Acad. Sci. USA* 103:6659. [PubMed](#)
4. Groh V, *et al.* 2006. *Nature Immunology* 7:755. [PubMed](#)
5. Tran DQ, *et al.* 2007. *Blood* doi:10.1182/blood-2007-06-094656. [PubMed](#)
6. Long SA, *et al.* 2008. *J Autoimmun.* 30:293. [PubMed](#)
7. Gong G, *et al.* 2009. *Blood* 113:837. [PubMed](#)
8. Long SA, *et al.* 2009. *Eur J. Immunol.* 39:612. [PubMed](#)
9. Long SA, *et al.* 2010. *Diabetes.* 59:407. [PubMed](#)
10. Ferraro A, *et al.* 2014. *PNAS.* 111:1111. [PubMed](#)
11. Vudattu NK, *et al.* 2014. *J Immunol.* 193:587. [PubMed](#)
12. Dupont G, *et al.* 2014. *Cytokine.* 69:146. [PubMed](#)

Product Citations

1. Krebs FK, *et al.* 2021. *Cancer Med.* . [PubMed](#)
2. Ariafar A, *et al.* 2020. *Heliyon.* 6:e05556. [PubMed](#)
3. Zimmer N, *et al.* 2020. *Cancers (Basel).* 12:00. [PubMed](#)
4. Eberhardt K, *et al.* 2015. *Clin Infect Dis.* 61: 1615 - 1623. [PubMed](#)
5. Woolsey C, *et al.* 2020. *Scientific Reports.* 10(1):3071. [PubMed](#)
6. Burbano YCB, *et al.* 2019. *Rev Soc Bras Med Trop.* 52:e20190101. [PubMed](#)
7. Park K, *et al.* 2008. *Cancer Res.* 68:8400. [PubMed](#)
8. Weiss E, *et al.* 2011. *J Immunol.* 187:1684. [PubMed](#)
9. , *et al.* 2021. *Eur J Immunol.* 51:2708. [PubMed](#)
10. Popmihajlov Z, Smith K 2008. *PLoS One.* 1.222916667. [PubMed](#)
11. Voo K, *et al.* 2009. *Proc Natl Acad Sci U S A.* 106:4793. [PubMed](#)
12. Cheng J, *et al.* 2022. *iScience.* 25:103588. [PubMed](#)
13. Pierini S, *et al.* 2020. *JCI Insight.* 5:00. [PubMed](#)
14. Voo K, *et al.* 2013. *J Immunol.* 191:3641. [PubMed](#)
15. Garg G, *et al.* 2012. *J Immunol.* 188:4644. [PubMed](#)
16. Kuranda K, *et al.* 2018. *J Clin Invest.* 128:5267. [PubMed](#)

RRID

AB_492983 (BioLegend Cat. No. 320207)
AB_492982 (BioLegend Cat. No. 320208)

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. |
| Regulation | FOXP3 is present at high levels in T regulatory cell can also be induced by T cell activation |
| Gene ID | 50943 |

Related Protocols

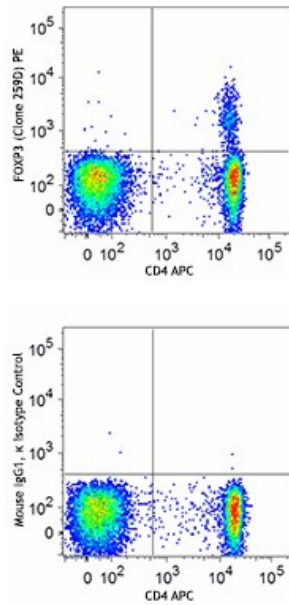
[True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)

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

Other Formats

PE anti-human FOXP3, Purified anti-human FOXP3, Alexa Fluor® 488 anti-human FOXP3, Alexa Fluor® 647 anti-human FOXP3, Pacific Blue™ anti-human FOXP3, True-Nuclear™ Human Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD4 PE-Cy5/CD25 PE)

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 259D) PE (top) or mouse IgG1, κ PE isotype control (bottom).

For research use only. Not for diagnostic use. Not for resale. BioLegend will not be held responsible for patent infringement or other violations that may occur with the use of our products.

*These products may be covered by one or more Limited Use Label Licenses (see the BioLegend Catalog or our website, www.biolegend.com/ordering#license). BioLegend products may not be transferred to third parties, resold, modified for resale, or used to manufacture commercial products, reverse engineer functionally similar materials, or to provide a service to third parties without written approval of BioLegend. By use of these products you accept the terms and conditions of all applicable Limited Use Label Licenses. Unless otherwise indicated, these products are for research use only and are not intended for human or animal diagnostic, therapeutic or commercial use.

BioLegend Inc., 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