

## Pacific Blue™ anti-mouse FOXP3 Antibody

<b>Catalog# / Size</b>	126409 / 25 µg 126410 / 100 µg
<b>Clone</b>	MF-14
<b>Regulatory Status</b>	RUO
<b>Other Names</b>	Forkhead box protein P3, Scurfin, JM2, IPEX, Zinc finger protein JM2
<b>Isotype</b>	Rat IgG2b, κ
<b>Description</b>	FOXP3 is a 47 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 <sup>+</sup> /CD25 <sup>-</sup> 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.

### Product Details

---

<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Formulation</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Preparation</b>	The antibody was purified by affinity chromatography, and conjugated with Pacific Blue™ under optimal conditions.
<b>Concentration</b>	0.5 mg/ml
<b>Storage &amp; Handling</b>	The antibody solution should be stored undiluted between 2°C and 8°C, and protected from prolonged exposure to light. <b>Do not freeze.</b>
<b>Application</b>	<a href="#">ICFC - Quality tested</a>
<b>Recommended Usage</b>	<p>Each lot of this antibody is quality control tested by intracellular flow cytometry using our <a href="#">True-Nuclear™ Transcription Factor Staining Protocol</a>. The suggested use of this reagent is ≤ 1.0 µg per 10<sup>6</sup> cells in 100 µl volume. It is highly recommended that the reagent be titrated for optimal performance for each application.</p> <p>* 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.</p> <p>Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation.</p> <p><a href="#">View full statement regarding label licenses</a></p>
<b>Excitation Laser</b>	Violet Laser (405 nm)
<b>Application Notes</b>	<b>NOTE:</b> For flow cytometric staining with this clone, True-Nuclear™ Transcription Factor Buffer Set (Cat. No. <a href="#">424401</a> ) offers improved staining and is highly recommended.
<b>Application References</b>	<ol style="list-style-type: none"><li>1. Ono M, <i>et al.</i> 2007. <i>Nature</i> 446:685.</li><li>2. Hori S, <i>et al.</i> 2003. <i>Science</i> 299:1057.</li><li>3. Fontenot JD, <i>et al.</i> 2003 <i>Nature Immunol</i> 4:330.</li><li>4. Fallarino F, <i>et al.</i> 2009. <i>J. Immunol.</i> 183:6033. <a href="#">PubMed</a></li><li>5. Barber A, <i>et al.</i> 2009 <i>J. Immunol.</i> 183:6939. <a href="#">PubMed</a></li><li>6. Nakashima H, <i>et al.</i> 2010. <i>J. Immunol.</i> 184:4637. <a href="#">PubMed</a></li></ol>

## Product Citations

1. Echevarría-Vargas IM, *et al.* 2018. EMBO Mol Med. 10:e8446. [PubMed](#)
2. Sadler K, *et al.* 2017. Tissue Eng Part A. 23:1044. [PubMed](#)
3. Zhu C, *et al.* 2018. Sci Rep. 5.113194444. [PubMed](#)
4. Kaur A, *et al.* 2019. Cancer Discov. 9:64. [PubMed](#)
5. Ouyang S, *et al.* 2019. J Immunol. 202:1441. [PubMed](#)
6. Pandey S, *et al.* 2014. J Immunol. 193:3632. [PubMed](#)
7. Pierini A, *et al.* 2015. J Immunol. 195: 347 - 355. [PubMed](#)
8. Jeon Y, *et al.* 2015. PLoS One. 10: e0139845. [PubMed](#)
9. Hering L, *et al.* 2020. Front Immunol. 1.747222222. [PubMed](#)

## RRID

AB\_2247064 (BioLegend Cat. No. 126409)  
AB\_2105047 (BioLegend Cat. No. 126410)

## Antigen Details

---

<b>Structure</b>	50-55 kd protein. Forkhead/winged-helix transcription factor family, contains zinc finger and forkhead domains.
<b>Distribution</b>	Nuclear; expressed in Treg cells.
<b>Function</b>	Master regulatory gene in Treg cell development, crucial for immune homeostasis.
<b>Interaction</b>	Interacts with DNA
<b>Cell Type</b>	Tregs
<b>Biology Area</b>	Immunology
<b>Molecular Family</b>	Nuclear Markers
<b>Antigen References</b>	<ol style="list-style-type: none"><li>1. Ono M, <i>et al.</i> 2007. <i>Nature</i> 446:685.</li><li>2. Hori S, <i>et al.</i> 2003. <i>Science</i> 299:1057.</li><li>3. Fontenot JD, <i>et al.</i> 2003 <i>Nature Immunol</i> 4:330.</li></ol>
<b>Regulation</b>	Present at high level in T reg cells. Induced by T cell activation.
<b>Gene ID</b>	<a href="#">20371</a>

## Related Protocols

---

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

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

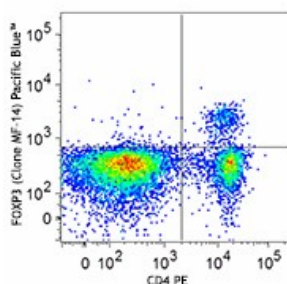
## Other Formats

---

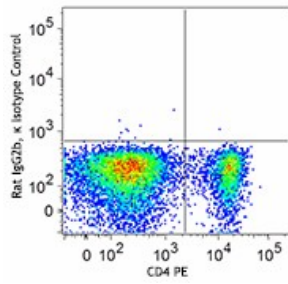
Purified anti-mouse FOXP3, PE anti-mouse FOXP3, Alexa Fluor® 488 anti-mouse FOXP3, Alexa Fluor® 647 anti-mouse FOXP3, Pacific Blue™ anti-mouse FOXP3, Brilliant Violet 421™ anti-mouse FOXP3, True-Nuclear™ One Step Staining Mouse Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP), Alexa Fluor® 700 anti-mouse FOXP3

## Product Data

---



C57BL/6 splenocytes were surface stained with CD4 PE and then treated with True-Nuclear™ Transcription Factor Buffer Set. Cells were then stained with FOXP3 (clone MF-14) Pacific Blue™ (top) or rat IgG2b, κ Pacific Blue™ 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](http://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](http://www.biolegend.com)  
Toll-Free Phone: 1-877-Bio-Legend (246-5343) Phone: (858) 768-5800 Fax: (877) 455-9587