

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

<b>Catalog# / Size</b>	136803 / 25 tests
<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

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<b>Verified Reactivity</b>	Mouse
<b>Antibody Type</b>	Monoclonal
<b>Host Species</b>	Rat
<b>Concentration</b>	Lot-specific (to obtain lot-specific concentration, please enter the lot number in our <a href="#">Concentration and Expiration Lookup</a> or <a href="#">Certificate of Analysis</a> online tools.)
<b>Storage &amp; Handling</b>	This kit is guaranteed for six months. Upon receipt, store 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>	<b>Materials Provided:</b> <ol style="list-style-type: none"><li>1. Alexa Fluor® 488 anti-mouse FOXP3/CD25 PE/CD4 PerCP antibody cocktail - 25 tests</li><li>2. Alexa Fluor® 488 Rat IgG2b, κ isotype control/CD25 PE/CD4 PerCP antibody cocktail - 25 tests</li><li>3. True-Nuclear™ Transcription Buffer Set - 120 tests (Cat. No. <a href="#">424401</a>)</li></ol>

**Materials not included:**

1. Cell Staining Buffer (Cat. No. [420201](#))
2. Single Color Compensation Controls

**Immunofluorescence Staining Procedures:**

1. Aliquot 100 µL of target cells to each tube.
2. Add 1 mL of the Transcription Factor 1X Fix solution to each tube, vortex, and incubate at room temperature in the dark for 45-60 minutes.
3. Without washing, add 2 mL of the Transcription Factor 1X Perm Buffer to each tube.
4. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant.
5. Add 2 mL of the Transcription Factor 1X Perm Buffer to each tube.
6. Centrifuge tubes at 400 x g at room temperature for five minutes, and discard the supernatant.
7. Resuspend the cell pellet in 100 µL of the Transcription Factor 1X Perm Buffer.
8. Add 20 µL of Alexa Fluor® 488 anti-mouse FOXP3/CD25 PE/CD4 PerCP antibody cocktail or 20 µL of Alexa Fluor® 488 rat IgG2b, 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](#)).

### Application References

(PubMed link indicates BioLegend citation)

1. Ono M, *et al.* 2007. *Nature* 446:685.
2. Hori S, *et al.* 2003. *Science* 299:1057.
3. Fontenot JD, *et al.* 2003 *Nature Immunol* 4:330.
4. Fallarino F, *et al.* 2009. *J. Immunol.* 183:6033. [PubMed](#)
5. Barber A, *et al.* 2009 *J. Immunol.* 183:6939. [PubMed](#)
6. Nakashima H, *et al.* 2010. *J. Immunol.* 184:4637. [PubMed](#)

### Product Citations

1. Peng K, *et al.* 2017. PLoS One.. 10.1371/journal.pone.0183271. [PubMed](#)
2. Lu Y, *et al.* 2018. *Cancer Cell.* 33:1048. [PubMed](#)

## Antigen Details

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<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, Transcription Factors
<b>Molecular Family</b>	CD Molecules, 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>

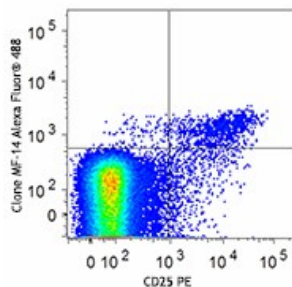
## Other Formats

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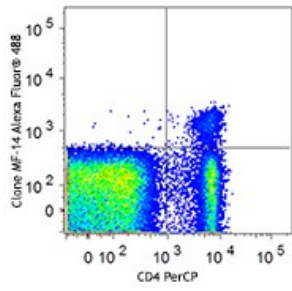
Purified anti-mouse FOXP3, PE anti-mouse FOXP3, Alexa Fluor® 488 anti-mouse FOXP3, Alexa Fluor® 647 anti-mouse FOXP3, Pacific Blue™ anti-mouse FOXP3, Brilliant Violet 421™ anti-mouse FOXP3, True-Nuclear™ One Step Staining Mouse Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP), Alexa Fluor® 700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

## Product Data

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C57BL/6 splenocytes were stained with True-Nuclear™ One Step Staining Mouse Treg Flow™ Kit (FOXP3 Alexa Fluor® 488/CD25 PE/CD4 PerCP).



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