

Alexa Fluor® 488 anti-mouse FOXP3 Antibody

Catalog# / Size	126405 / 25 µg 126406 / 100 µg
Clone	MF-14
Regulatory Status	RUO
Other Names	Forkhead box protein P3, Scurfin, JM2, IPEX, Zinc finger protein JM2
Isotype	Rat IgG2b, κ
Description	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 ⁺ /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.

Product Details

Verified Reactivity	Mouse
Antibody Type	Monoclonal
Host Species	Rat
Formulation	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
Preparation	The antibody was purified by affinity chromatography and conjugated with Alexa Fluor® 488 under optimal conditions.
Concentration	0.5 mg/ml
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 IHC - Verified
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 ≤ 0.25 µg per 10 ⁶ cells in 100 µl volume. It is recommended that the reagent be titrated for optimal performance for each application. * Alexa Fluor® 488 has a maximum emission of 519 nm when it is excited at 488 nm. Alexa Fluor® and Pacific Blue™ are trademarks of Life Technologies Corporation. View full statement regarding label licenses
Excitation Laser	Blue Laser (488 nm)
Application Notes	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)	<ol style="list-style-type: none"> 1. Ono M, <i>et al.</i> 2007. <i>Nature</i> 446:685. 2. Hori S, <i>et al.</i> 2003. <i>Science</i> 299:1057. 3. Fontenot JD, <i>et al.</i> 2003 <i>Nature Immunol</i> 4:330. 4. Fallarino F, <i>et al.</i> 2009. <i>J. Immunol.</i> 183:6033. PubMed 5. Barber A, <i>et al.</i> 2009 <i>J. Immunol.</i> 183:6939. PubMed 6. Nakashima H, <i>et al.</i> 2010. <i>J. Immunol.</i> 184:4637. PubMed
Product Citations	

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RRID AB_1089114 (BioLegend Cat. No. 126405)
 AB_1089113 (BioLegend Cat. No. 126406)

Antigen Details

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

Related Protocols

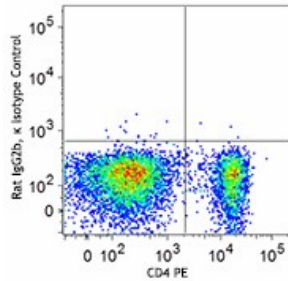
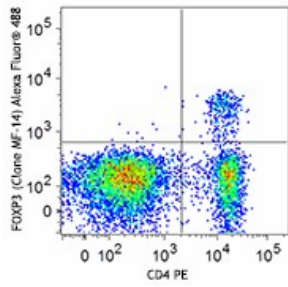
[True-Nuclear™ Transcription Factor Staining Protocol for 96-Well U Bottom Plate](#)

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

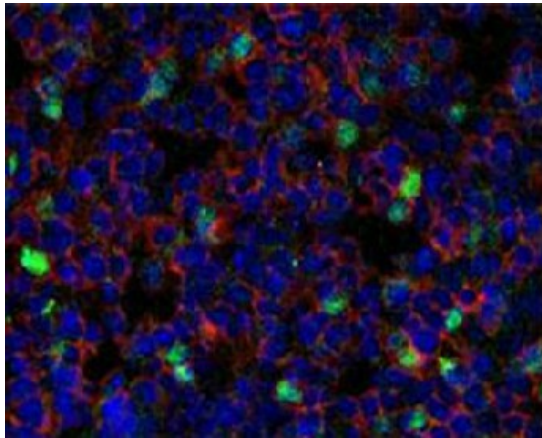
Other Formats

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) Alexa Fluor® 488 (top) or rat IgG2b, κ Alexa Fluor® 488 isotype control (bottom).



OCT frozen mouse lymph node 5 μm sections were fixed with 4% PFA and permeabilized with 0.1% Triton X-100. Slides were stained with Purified anti-mouse CD4 (clone RM4-5), followed by goat anti-rat IgG DyLight™ 594 (red). Slides were then stained with Alexa Fluor® 488 anti-mouse FOXP3 (clone MF-14) (green) and counterstained with DAPI (blue). Slides were mounted with Prolong Gold and imaged the next day.

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