Technical Data Sheet

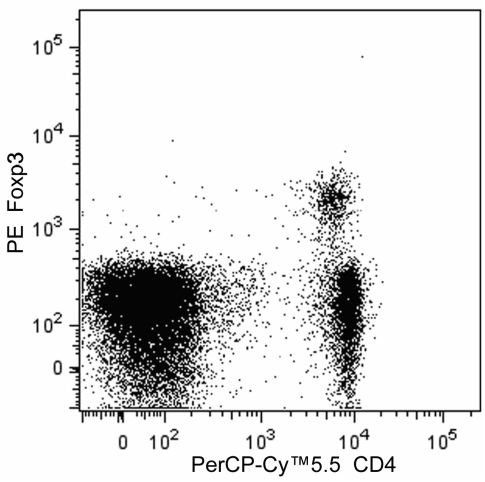
PE Rat anti-Mouse Foxp3

Product Information

Material Number:	**563101**
Alternate Name:	Forkhead box P3; IPEX; Forkhead box protein P3; JM2; Scurfin; Scurfy; Sf
Size:	0.1 mg
Concentration:	0.2 mg/ml
Clone:	R16-715
Isotype:	Rat IgG2a, κ
Reactivity:	QC Testing: Mouse
Storage Buffer:	Aqueous buffered solution containing ≤0.09% sodium azide.

Description

The R16-715 monoclonal antibody specifically binds to mouse Foxp3. Foxp3 is a 50-55 kDa protein also known as Forkhead box P3, JM2, IPEX, Scurfin, and Sf. It is a member of the forkhead or winged helix family of transcription factors and is specifically expressed by T regulatory (Treg) cells. Foxp3 is a key regulatory protein for Treg cell development and function. Ectopic expression of Foxp3 in conventional T cells is sufficient to induce suppressive activity, repress the production of cytokines such as IL2 and IFN-γ, and upregulate Treg cell-associated molecules such as CD25, CTLA4 and GITR. It has been found that the mutation of Foxp3 is responsible for "scurfy" mice. When overexpressed, Foxp3 leads to poor T cell proliferation and activation.



Multicolor flow cytometric analysis of Foxp3 expression in mouse splenic lymphocytes. *BALB/c mouse splenic leucocytes were fixed and permeabilized using appropriately-diluted solutions from the Transcription Factor Buffer Set (Cat. No. 562574/562725). The cells were then stained with PerCP-Cy™5.5 Rat Anti-Mouse CD4 (Cat. No. 550954/ 561115) and PE Rat Anti-Mouse Foxp3 (Cat. No. 563101) antibodies. The two-color flow cytometric dot plot shows the correlated expression patterns of CD4 versus Foxp3 for gated events with the forward and side light-scatter characteristics of intact lymphocytes. Flow cytometry was performed using a BD LSRFortessa™ Cell Analyzer System.*

Preparation and Storage

Store undiluted at 4°C and protected from prolonged exposure to light. Do not freeze.

The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity chromatography.

The antibody was conjugated with R-PE under optimum conditions, and unconjugated antibody and free PE were removed.

Application Notes

Application

Intracellular staining (flow cytometry)	Routinely Tested

Suggested Companion Products

Catalog Number	Name	Size	Clone
562574	Transcription Factor Buffer Set	100 tests	(none)
562725	Transcription Factor Buffer Set	25 tests	(none)
550954	PerCP-Cy™5.5 Rat Anti-Mouse CD4	0.1 mg	RM4-5
561115	PerCP-Cy™5.5 Rat Anti-Mouse CD4	25 µg	RM4-5
554656	Stain Buffer (FBS)	500 ml	(none)
555899	Lysing Buffer	100 ml	(none)
553930	PE Rat IgG2a, κ Isotype Control	0.1 mg	R35-95

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Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. An isotype control should be used at the same concentration as the antibody of interest.
3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing.
4. For fluorochrome spectra and suitable instrument settings, please refer to our Multicolor Flow Cytometry web page at www.bdbiosciences.com/colors.
5. Please refer to www.bdbiosciences.com/pharmingen/protocols for technical protocols.

References

Brunkow ME, Jeffery EW, Hjerrild KA, et al. Disruption of a new forkhead/winged-helix protein, scurfin, results in the fatal lymphoproliferative disorder of the scurfy mouse. *Nat Genet.* 2001; 27(1):68-73. (Biology)

Hori S, Nomura T, Sakaguchi S. Control of regulatory T cell development by the transcription factor Foxp3. *Science.* 2003; 299(5609):1057-1061. (Biology)

Jinushi M, Sato M, Kanamoto A, et al. Milk fat globule epidermal growth factor-8 blockade triggers tumor destruction through coordinated cell-autonomous and immune-mediated mechanisms. *J Exp Med.* 2009; 206(6):1317-1326. (Biology)

Vasconcellos R, Carter NA, Rosser EC, Mauri C. IL-12p35 subunit contributes to autoimmunity by limiting IL-27-driven regulatory responses. *J Immunol.* 2011; 187(6):3402-3412. (Biology)

Zheng Y, Rudensky AY. Foxp3 in control of the regulatory T cell lineage. *Nat Immunol.* 2007; 8:457-462. (Biology)

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