

## Technical Data Sheet

**V450 Rat Anti-Mouse Foxp3****Product Information**

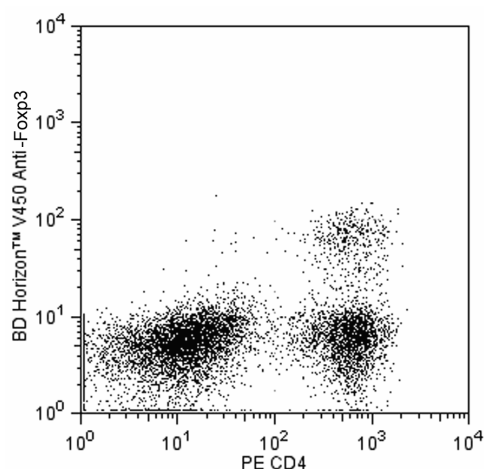
<b>Material Number:</b>	<b>561293</b>
<b>Alternate Name:</b>	Forkhead box P3; Forkhead box protein P3; JM2; Scurfin; Scurfy; Sf
<b>Size:</b>	50 µg
<b>Concentration:</b>	0.2 mg/ml
<b>Clone:</b>	MF23
<b>Immunogen:</b>	Mouse Foxp3 Recombinant Protein
<b>Isotype:</b>	Rat IgG2b
<b>Reactivity:</b>	QC Testing: Mouse
<b>Storage Buffer:</b>	Aqueous buffered solution containing protein stabilizer and ≤0.09% sodium azide.

**Description**

Foxp3 is a 50-55 kDa protein also known as Forkhead box P3, JM2, or IPEX. It is a member of the forkhead or winged helix family of transcription factors and is specifically expressed by T regulatory (Treg) cells. Foxp3 has been reported to be 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.

The MF23 monoclonal antibody specifically binds to mouse Foxp3. Immunoblotting with MF23 antibody has confirmed it recognizes an epitope between 1-87 amino acids in the N-terminal domain.

The antibody is conjugated to BD Horizon™ V450, which has been developed for use in multicolor flow cytometry experiments and is available exclusively from BD Biosciences. It is excited by the Violet laser Ex max of 406 nm and has an Em Max at 450 nm. Conjugates with BD Horizon™ V450 can be used in place of Pacific Blue™ conjugates.



**Flow cytometric analysis of Foxp3 expression in BALB/c mouse splenocytes.** Splenocytes from BALB/c mice were fixed and permeabilized using working solutions of Mouse Foxp3 Buffers (Mouse Foxp3 Buffer Set, Cat. No. 560409). The cells were then stained with PE Rat anti-Mouse CD4 (Cat. No. 553048) and BD Horizon™ V450 Rat anti-Mouse FoxP3 antibodies (Cat. No. 561293). The flow cytometric dot plot shows the correlated expression of CD4 versus Foxp3 for gated events with the forward and side light-scattering characteristics of viable lymphocytes. Flow cytometry was performed using a BD™ LSR II Flow Cytometry System.

**Preparation and Storage**

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

The antibody was conjugated with BD Horizon™ V450 under optimum conditions, and unreacted BD Horizon™ V450 was removed.

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

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## Application Notes

### Application

Intracellular staining (flow cytometry)

Routinely Tested

### Suggested Companion Products

<u>Catalog Number</u>	<u>Name</u>	<u>Size</u>	<u>Clone</u>
560409	Mouse Foxp3 Buffer Set	100 tests	(none)
554656	Stain Buffer (FBS)	500 ml	(none)
553048	PE Rat Anti-Mouse CD4	0.1 mg	RM4-5

### Product Notices

1. Since applications vary, each investigator should titrate the reagent to obtain optimal results.
2. Please refer to [www.bdbiosciences.com/pharming/en/protocols](http://www.bdbiosciences.com/pharming/en/protocols) for technical protocols.
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 Fluorochrome Web Page at [www.bdbiosciences.com/colors](http://www.bdbiosciences.com/colors).
5. BD Horizon™ V450 has a maximum absorption of 406 nm and maximum emission of 450 nm. Before staining with this reagent, please confirm that your flow cytometer is capable of exciting the fluorochrome and discriminating the resulting fluorescence.
6. Pacific Blue™ is a trademark of Molecular Probes, Inc., Eugene, OR.

### References

Hori S, Nomura T, Sakaguchi S. Control of regulatory T cell development by the transcription factor Foxp3. *Science*. 2003; 299(5609):1057-1061. (Biology)  
Ono M, Yaguchi H, Ohkura N, et al. Foxp3 controls regulatory T-cell function by interacting with AML1/Runx1. *Nature*. 2007; 446(7136):685-689. (Biology)  
Zheng Y, Rudensky AY. Foxp3 in control of the regulatory T cell lineage. *Nat Immunol*. 2007; 8:457-462. (Biology)