

## Mouse Anti-Human Foxp3

Cat. No.	Form	Quantity
12200-01	Purified (UNLB) Antibody	0.1 mg
12200-02	Fluorescein (FITC) Conjugate	100 Tests
12200-31	*Alexa Fluor <sup>®</sup> 647 (AF647) Conjugate	100 Tests

### DESCRIPTION

**Clone** SB151b  
**Ig Isotype** Mouse IgG1  
**Immunogen** Full length recombinant Human Foxp3  
**Specificity** Human Foxp3 (Mr ~57 kDa). Does not cross react with Mouse Foxp3.

T regulatory cells (Originally called T suppressor cells) are a subpopulation of T cells. Their major roles are to suppress excess immune response of other cells and to maintain tolerance of self-antigens. Initially, researchers used CD4 and CD25 (IL-2 receptor) to identify T suppress subpopulation and purified CD4+CD25+ T cells were used for T cells Suppression Assay, however some other activated T cells also express CD25.<sup>1,2</sup> The most convincing molecular marker of Treg cells is Forkhead box protein 3 (Foxp3) which is expressed in the nucleus.<sup>3</sup> Anti-Foxp3 antibodies are now widely applied to identify the roles of Treg cells in the development of many diseases, such as cancer, autoimmune disease, and organ transplantation.<sup>4,5,6</sup> Scientists found that the over-activation of Treg cells may cause cancer cells to escape from immune surveillance<sup>5</sup>. Conversely, patients with autoimmune diseases such as psoriasis, systemic lupus erythematosus (SLE) have relative dysfunction of Foxp3 positive cells.<sup>7,8</sup> Immunologists are trying to induce immune tolerance in organ transplantation using Treg cells.<sup>6</sup>

### RESEARCH APPLICATIONS

- Flow cytometry
- Immunohistochemistry (frozen sections)
- Western blotting

### CHARACTERIZATION

To insure acceptable performance, each batch of product is tested by flow cytometry to conform to characteristics of a standard reference reagent. Representative flow data are included in this product insert.

### WORKING DILUTIONS

<b>Flow Cytometry:</b>	FITC conjugate	10 $\mu$ L/10 <sup>6</sup> cells
	AF647 conjugate	10 $\mu$ L/10 <sup>6</sup> cells
<b>Western Blotting:</b>	Purified antibody	1-5 $\mu$ g/mL

**Other Applications:** Since applications vary, you should determine the optimum working dilution of the product that is appropriate for your specific need.

***For Research Use Only. Not for Diagnostic or Therapeutic Use.***

## Flow Cytometry

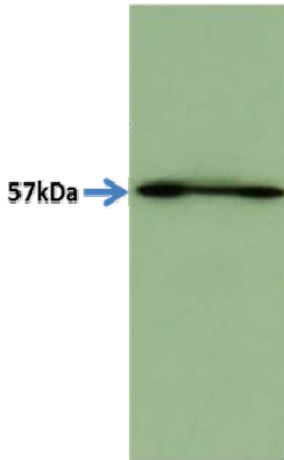
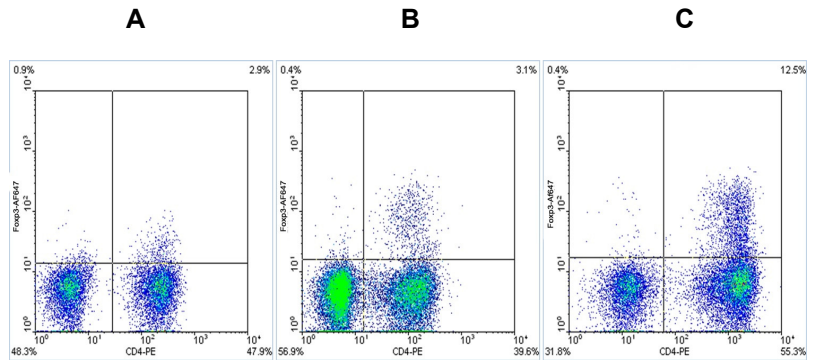
**Product:** Mouse Anti-Human Foxp3  
**Cat. No.:** 12200-31  
**Amount Used:** 10  $\mu$ L/10<sup>6</sup> cells

Cells were surface stained with Human CD4-PE (Cat. No. 9522-09) and then fixed and permeabilized followed by staining with Human Foxp3-Alexa Fluor® 647 (Cat. No. 12200-31).

**A:** Normal PBMC

**B:** Normal PBMC stimulated with Anti-CD3 (Cat. No. 9515-14)

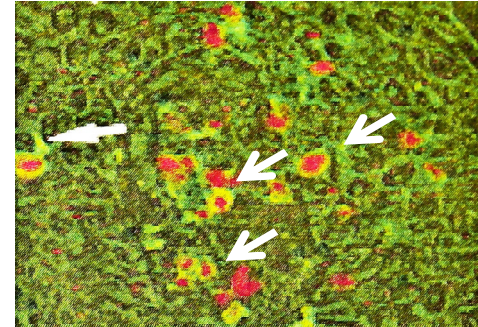
**C:** Lymphocytes from cancer patient



## Western Blot

Anti-Human Foxp3 supernatant analyzed by western blot using Human PBMC lysate. Goat Anti-Mouse IgG-HRP (Cat. No. 1030-05) was used as the secondary antibody. A single positive band was detected at 57kDa.

## Immunohistochemistry



Human tonsillar frozen tissue was double stained with anti-CD25-FITC (green) and anti-Human Foxp3-TXRD (in development).

## HANDLING AND STORAGE

- The purified (UNLB) antibody is supplied as 0.1 mg of purified immunoglobulin in 0.1 mL of borate buffered saline, pH 8.2. *No preservatives or amine-containing buffer salts added.* Store at 2-8°C.
- The fluorescein (FITC) and Alexa Fluor® 647 (AF647) conjugates are supplied as 100 Tests in 1.0 mL PBS/NaN<sub>3</sub>. Store at 2-8°C.

## REFERENCES

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3. Zhang L, Zhao Y (June 2007). "The regulation of Foxp3 expression in regulatory CD4(+)CD25(+)T cells: multiple pathways on the road". *J. Cell. Physiol.* 211 (3): 590-597.
4. Sakaguchi S, Sakaguchi N, Shimizu J, Yamazaki S, Sakihama T, Itoh M, Kuniyasu Y, Nomura T, Toda M, Takahashi T. Immunologic tolerance maintained by CD25+ CD4+ regulatory T cells: their common role in controlling autoimmunity, tumor immunity, and transplantation tolerance. *Immunol Rev.* 2001 Aug; 182:18-32
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6. FOXP3(+) regulatory T cells: From suppression of rejection to induction of renal allograft tolerance. Dummer CD, Carpio VN, Gonçalves LF, Manfro RC, Veronese FV. *Transpl Immunol.* 2011 Sep 13.
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