

## Anti-Human CD25 (IL-2R $\alpha$ ) Antibody

<b>Catalog Number:</b>	110801, 110802
<b>Size:</b>	100 ug, 500 ug
<b>Target Name:</b>	CD25, IL-2R $\alpha$ chain, Low affinity IL-2R
<b>Regulatory Status:</b>	RUO

### PRODUCT DETAILS

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<b>Clone:</b>	BC96
<b>Application:</b>	Flow Cytometry
<b>Reactivity:</b>	Human
<b>Format:</b>	Purified
<b>Isotype:</b>	Mouse IgG1
<b>Antibody Type:</b>	Monoclonal
<b>Formulation:</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
<b>Protein Concentration:</b>	0.5 mg/mL
<b>Storage&amp;Handling:</b>	The antibody solution should be stored between 2°C and 8°C
<b>Recommended Usage:</b>	For flow cytometric staining, it is recommended to use less than 0.2 $\mu$ g of this reagent per 0.5-1.0 million cells in a 100 $\mu$ L volume. Optimal reagent performance should be determined by titration for each specific application.
<b>Isotype Control:</b>	301401

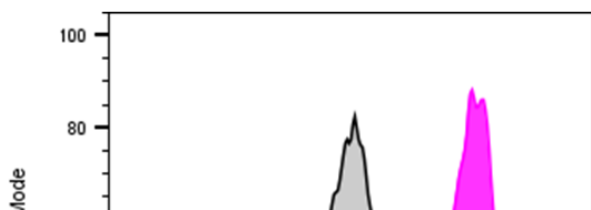
### BACKGROUND INFORMATION

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CD25 is a 55 kDa type I transmembrane glycoprotein and the alpha chain of the high-affinity interleukin-2 receptor (IL-2R). It is expressed on activated T and B cells, progenitor lymphocytes, activated monocytes/macrophages, and a subset of non-stimulated CD4<sup>+</sup> regulatory T cells (Tregs). CD25 associates with the IL-2 receptor  $\beta$  (CD122) and common  $\gamma$  (CD132) chains to form the functional high-affinity IL-2R complex. Functionally, CD25 is critical for T cell activation, proliferation, and immune regulation. Deficiency of CD25 in mice causes severe autoimmunity and lethal lymphoproliferative disorders, mirroring defects seen in FOXP3 deficiency. In humans, genetic studies and case-control analyses have linked CD25 to autoimmune diseases such as Graves' disease, often accompanied by elevated soluble IL-2R $\alpha$  (sIL-2R $\alpha$ ). Its role in immune regulation also makes it a target in certain cancer immunotherapies.

### PRODUCT DATA

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Anti-human CD3 and Anti-human CD28 stimulated Human peripheral blood lymphocytes were stained with either purified Anti-Human CD25 Clone BC96 (color-filled histogram) or an isotype control (gray histogram), followed by PE Anti-Mouse IgG1.

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