

## Technical Data Sheet

### iF647 Anti-Human CD25

**Catalog Number:** 110803, 110804  
**Size:** 25 tests, 100 tests  
**Target Name:** CD25, IL-2R  $\alpha$  chain, Low affinity IL-2R  
**Regulatory Status:** RUO

#### Product Details

---

**Clone:** BC96  
**Application:** FC  
**Reactivity:** Human  
**Format:** iF647  
**Isotype:** Mouse IgG1  
**Antibody Type:** Monoclonal  
**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA  
**Protein Concentration:** Supplied at a lot-specific concentration.  
**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.  
**Recommended Usage:** For flow cytometric staining, it is recommended to use 5  $\mu$ L 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.  
**Excitation Laser:** Red Laser (633 nm)  
**Release Date:** Dec-25

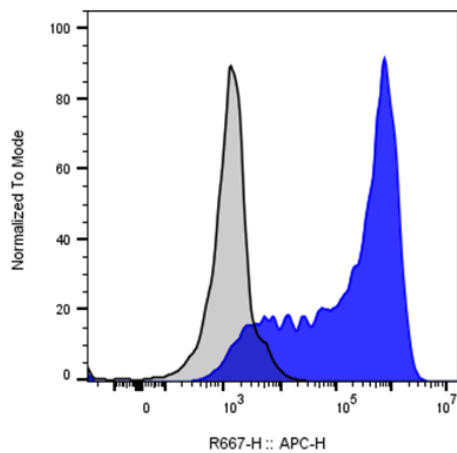
#### Background Information

---

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+ 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

---



Anti-human CD3 and Anti-Human CD28 stimulated human peripheral blood lymphocytes was stained with iF647 Anti-Human CD25 clone BC96 (color-filled histogram) or an isotype control (gray histogram).