



Antibodies

PB-580-C025

Monoclonal Antibody to CD4 (mouse) Pacific Blue™ conjugated (0.025 mg)

Clone:	GK1.5
Isotype:	Rat IgG2b
Specificity:	The rat monoclonal antibody GK1.5 reacts with an extracellular epitope of mouse CD4 transmembrane glycoprotein (55 kDa).
Immunogen:	Mouse CTL clone V4 cells
Species Reactivity:	Mouse
Preparation:	The purified antibody is conjugated with Pacific Blue [®] 488; under optimum conditions. The conjugate is purified by size-exclusion chromatography.
Storage Buffer:	The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Storage / Stability:	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label. Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.
Usage:	The reagent is designed for Flow Cytometry analysis. The suggested working concentration is 2 µg/ml.
Expiration:	See vial label
Lot Number:	See vial label
Background:	CD4 is a single chain transmembrane glycoprotein of immunoglobulin supergene family. In its extracellular region there are 4 immunoglobulin-like domains (1 Ig-like V-type and 3 Ig-like C2-type). The intracellular region of CD4 associates with p56Lck, a Src-like protein tyrosine kinase. It was described that CD4 segregates into specific detergent-resistant T-cell membrane microdomains. CD4 binds to MHC class II molecules (by CDR2-like region in CD4 domain 1), HIV envelope protein gp120 (by CDR2-like region in CD4 domain 1) and other ligands, such as IL-16 (by to CD4 domain 3) or L-selectin. CD4 is a co-receptor involved in immune response (co-receptor activity in binding to MHC class II molecules) and HIV infection. CD4 regulates T-cell activation, T/B-cell adhesion, T-cell differentiation, T-cell selection and signal transduction. Defects in antigen presentation (MHC class II) cause dysfunction of CD4 ⁺ T-cells and their almost complete absence in patients blood, tissue and organs (SCID immunodeficiency).

For laboratory research only, not for drug, diagnostic or other use.

**Antibodies****References:**

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- *Godfrey DI, Kennedy J, Gately MK, Hakimi J, Hubbard BR, Zlotnik A: IL-12 influences intrathymic T cell development. *J Immunol.* 1994 Mar 15;152(6):2729-35.
- *Gavett SH, Chen X, Finkelman F, Wills-Karp M: Depletion of murine CD4+ T lymphocytes prevents antigen-induced airway hyperreactivity and pulmonary eosinophilia. *Am J Respir Cell Mol Biol.* 1994 Jun;10(6):587-93.
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- *Yi H, Zhen Y, Zeng C, Zhang L, Zhao Y: Depleting anti-CD4 monoclonal antibody (GK1.5) treatment: influence on regulatory CD4+CD25+Foxp3+ T cells in mice. *Transplantation.* 2008 Apr 27;85(8):1167-74.
- *And many other.

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