

ProteinFind® Anti-CD4 Mouse Monoclonal Antibody

Please read the datasheet carefully prior to use.

Cat. No. HI103

Version No. Version 2.0

Storage: PBS (pH7.4), 0.05% ProClin 300, 50% Glycerol; at -20°C for two years, avoid repeated freeze-thawing.

Description

CD4 also called T-cell surface antigen T4/Leu-3 (T-cell surface antigen T4/Leu-3), is a transmembrane glycoprotein with molecular weight of 51 kDa. CD4 is mainly expressed in the cell surfaces such as helper T cells, macrophages, dendritic cells, or NK cells, which plays an important role in the development and activation of T cells^[1-4]. CD4, a co-receptor for T-cell receptor (T cell receptor, TCR), which binds to the MHC class II molecules, stabilizes the combination of TCR and the complex of antigenic peptide-MHC. It can recruit the lymphocyte-specific protein tyrosine kinase Lck to the TCR-CD3 complex among the helper T cells, involves in cell activation, migration, release of cytokines, etc. through phosphorylating various substrates to initiate different intracellular signaling pathways^[5]. In macrophages or NK cells, CD4 promotes the cell activation and differentiation through Lck-independent pathways, and releases cytokines^[2,4]. This product is the mouse anti-human CD4 monoclonal antibody, which is used for the specific detection of human CD4 by FC.

Species Reactivity: Human

Clone Number: Trans-6A2

Antibody Subtype: Mouse IgG2b

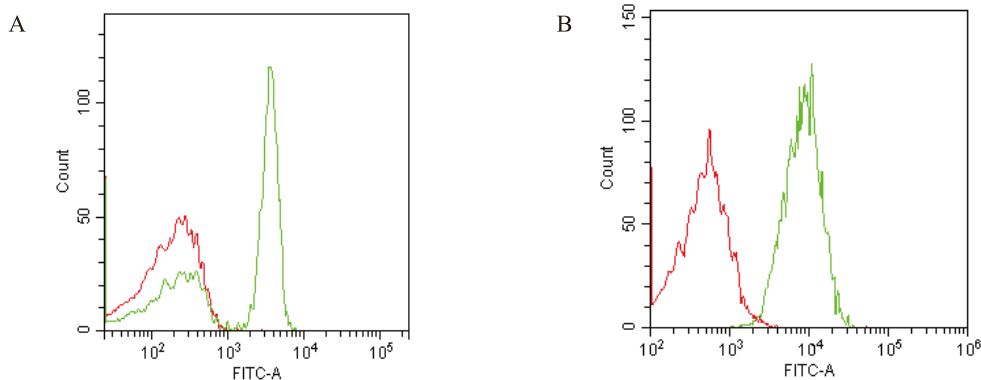
Immunogen

- Recombinant human CD4 partial extracellular structural domain
- Entrez Gene ID: 920
- UniProt ID: P01730

Applicable Experiment and Dilution

- FC: 1:100 dilution is recommended

Positive Control Cell Line: THP-1 cell



FC: ProteinFind® Anti-CD4 Mouse Monoclonal Antibody (green) on human peripheral blood (picture A) and THP-1 cells (picture B).

Negative control is Mouse IgG2b Isotype Control (red).

Dilution ratio of primary antibody: 1:100



References

- [1] Isobe M, Huebner K, Maddon PJ, et al. The gene encoding the T-cell surface protein T4 is located on human chromosome 12 [J]. Proc Natl Acad Sci U S A. 1986, 83(12): 4399-402.
- [2] Zhen A, Krutzik SR, Levin BR, et al. CD4 ligation on human blood monocytes triggers macrophage differentiation and enhances HIV infection [J]. J Virol. 2014, 88(17): 9934-46.
- [3] Winkel K, Sotzik F, Vremec D, et al. CD4 and CD8 expression by human and mouse thymic dendritic cells [J]. Immunol Lett. 1994, 40(2): 93-9.
- [4] Bernstein HB, Plasterer MC, Schiff SE, et al. CD4 Expression on Activated NK Cells: Ligation of CD4 Induces Cytokine Expression and Cell Migration [J]. The Journal of Immunology. 2006, 177(6): 3669-76.
- [5] Jönsson P, Southcombe JH, Santos AM, et al. Remarkably low affinity of CD4/peptide-major histocompatibility complex class II protein interactions [J]. Proc Natl Acad Sci U S A. 2016, 113(20): 5682-7.

For research use only, not for clinical diagnosis.

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Service telephone +86-10-57815020

Service email complaints@transgen.com

