TECHNICAL DATA SHEET

Purified Anti-Human CD4 (RPA-T4)

Catalog Number: 70-0049

PRODUCT INFORMATION

Contents: Purified Anti-Human CD4 (RPA-T4)

Isotype: Mouse IgG1, kappa

Concentration: 0.5 mg/mL

Clone: RPA-T4

Reactivity: Human

Formulation: 10 mM NaH2PO4, 150 mM NaCl, 0.09% NaN3, pH7.2

DESCRIPTION

The RPA-T4 antibody reacts with human CD4, a 59 kDa protein which acts as a co-receptor for the T cell receptor (TCR) in its interaction with MHC Class II molecules on antigen-presenting cells. The extracellular domain of CD4 binds to the beta-2 domain of MHC Class II, while its cytoplasmic tail provides a binding site for the tyrosine kinase lck, facilitating the signaling cascade that initiates T cell activation. CD4, and co-receptors CCR5 and CXCR4, may also be utilized by HIV-1 to enter T cells. Human CD4 is typically expressed on thymocytes, some mature T cell populations such as Th17 and T regulatory (Treg) cells, as well as on dendritic cells.The RPA-T4 antibody is widely used as a phenotypic marker for human CD4 expression, and is cross-reactive with Chimpanzee CD4. This antibody recognizes a different epitope, and thus does not block binding of, the alternative Anti-Human CD4 antibody clone OKT4 (Reinherz EL, et al. 1979. Proc. Natl. Acad. Sci. 76:4061-4065)

PREPARATION & STORAGE

This monoclonal antibody preparation was purified from tissue culture supernatant via affinity chromatography. For In Vivo Ready™ (IVR) products, each preparation is also evaluated for endotoxin levels using the LAL assay. It is recommended to store the product undiluted at 4°C. Do not freeze.

APPLICATION NOTES

This purified format is guaranteed to be >90% pure as determined by SDS-PAGE analysis. Citations are provided as a convenience to you - please consult Materials and Methods sections for additional details about the use of any product in these publications.

REFERENCES

Toma J, Weinheimer SP, Stawiski E, Whitcomb JM, Lewis ST, Petropoulos CJ, and Huang W. 2011. J. Virol. 85: 3872-3880. (Blocking: HIV-1 interaction)Porter KA, Kelley LN, Nekorchuk MD, Jones JH, Hahn AB, de Noronha CMC, Harton JA, and Duus KM. 2010. J. Immunol. 185:6480-6488. (Blocking: HIV-1 interaction)Hsieh S-C, Tsai W-Y, and Wang W-K. 2010. J. Virol. 84(9): 4782-4797. (immunoprecipitation – transfected cells)Chen X, Wang X, Besra GS, and Gumperz JE. 2007. J. Leukoc. Biol. 82:1455-1465. (in vitro activation)Thedrez A, de Lalla C, Allain S, Zaccagnino L, et al. 2007. Blood. 110:251-258 (in vitro blocking)Mack CL, Tucker RM, Sokol RJ, Darrer FM, Kotzin BL, Whitington PF and Miller SD. 2004. Pediatr. Res. 56(1):79-87. (immunohistochemistry – frozen tissue)Deng MC, Bell S, Huie P, Pinto F, Hunt SA, Stinson EB, Sibley R, Hall BM, and Valantine HA. 1995. Circulation. 91: 1647-1654. (immunohistochemistry – OCT embedded frozen tissue)

NOTE: Please choose the appropriate format for each application. Citations are provided as a convenience to you; please consult Materials and Methods sections for additional details about the use of any product in these publications.