Revision 4

#78292 Store at +4C

# CD4 (RPA-T4) Mouse mAb (APC Conjugate)

Cell Signaling TECHNOLOGY®

**Orders:** 877-616-CELL (2355) orders@cellsignal.com

**Support:** 877-678-TECH (8324)

**Web:** info@cellsignal.com cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

**For Research Use Only. Not for Use in Diagnostic Procedures.**

| Applications: | Reactivity: | Sensitivity: | Source/Isotype: | UniProt ID: | Entrez-Gene Id: |
|---|---|---|---|---|---|
| FC-FP, FC-L | H | Endogenous | Mouse IgG1 | #P01730 | 920 |

## Product Usage Information

| Application | Dilution |
|---|---|
| Flow Cytometry (Fixed/Permeabilized) | 1:20 |
| Flow Cytometry (Live) | 1:20 |

## Storage

Supplied in 10 mM $NaH_2PO_4$, 150 mM NaCl, 0.09% $NaN_3$, 0.1% gelatin, pH7.2. This product is stable for 12 months when stored at 4ºC. Do not aliquot the antibody. Protect from light. Do not freeze.

## Specificity / Sensitivity

CD4 (RPA-T4) Mouse mAb (APC Conjugate) recognizes endogenous levels of total CD4 protein. This antibody detects an epitope within the extracellular domain.

## Source / Purification

This monoclonal antibody was purified from tissue culture supernatant via affinity chromatography. The purified antibody was conjugated under optimal conditions, with unreacted dye removed from the preparation.

## Product Description

This Cell Signaling Technology antibody is conjugated to allophycocyanin (APC) and tested in-house for direct flow cytometric analysis in human cells.

## Background

Cluster of Differentiation 4 (CD4) is a glycoprotein composed of an amino-terminal extracellular domain (four domains: D1-D4 with Ig-like structures), a transmembrane part, and a short cytoplasmic tail. CD4 is expressed on the surface of T helper cells, regulatory T cells, monocytes, macrophages, and dendritic cells, and plays an important role in the development and activation of T cells. On T cells, CD4 is the co-receptor for the T cell receptor (TCR), and these two distinct structures recognize the Antigen–Major Histocompatibility Complex (MHC). Specifically, the D1 domain of CD4 interacts with the β2-domain of the MHC class II molecule. CD4 ensures specificity of the TCR–antigen interaction, prolongs the contact between the T cell and the antigen presenting cell, and recruits the tyrosine kinase Lck, which is essential for T cell activation (1).

## Background References

1. Zamoyska, R. (1994) *Immunity* 1, 243-6.

## Species Reactivity

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

## Applications Key

**FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

## Cross-Reactivity Key

**H:** human **M:** mouse **R:** rat **Hm:** hamster **Mk:** monkey **Vir:** virus **Mi:** mink **C:** chicken **Dm:** D. melanogaster **X:** Xenopus **Z:** zebrafish **B:** bovine **Dg:** dog **Pg:** pig **Sc:** S. cerevisiae **Ce:** C. elegans **Hr:** horse **GP:** Guinea Pig **Rab:** rabbit **All:** all species expected

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