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CD4 (RM4-5) Rat mAb (violetFluor™ 450 Conjugate)

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

Applications:	Reactivity:	Sensitivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
IF-F, FC-FP, FC-L	M	Endogenous	Rat IgG2a kappa	#P06332	12504

Product Usage Information

For optimal flow cytometry results, we recommend 0.125 µg of antibody per test.

Application

Immunofluorescence (Frozen)
Flow Cytometry (Fixed/Permeabilized)
Flow Cytometry (Live)

Dilution

1:50 - 1:200
1:160
1:160

Storage

Supplied in 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% Na₃, 0.1% gelatin, pH 7.2. This product is stable for 12 months when stored at 4°C. Do not aliquot the antibody. Protect from light. Do not freeze.

Specificity/Sensitivity

CD4 (RM4-5) Rat mAb (violetFluor™ 450 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.

Description

This Cell Signaling Technology antibody is conjugated to violetFluor™ 450 and tested in-house for direct flow cytometric analysis in mouse 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

IF-F: Immunofluorescence (Frozen) **FC-FP:** Flow Cytometry (Fixed/Permeabilized) **FC-L:** Flow Cytometry (Live)

Cross-Reactivity Key

M: Mouse

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