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## CD4 (RM4-5) Rat mAb (redFluor™ 710 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

1:200 - 1:800  
1:160  
1:160

### Storage

Supplied in 10 mM NaH<sub>2</sub>PO<sub>4</sub>, 150 mM NaCl, 0.09% Na<sub>3</sub>N, 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 (redFluor™ 710 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 redFluor™ 710 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 β<sub>2</sub>-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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