Antibodies

Anti-Mouse CD4 Antibody, Clone RM4-5

Rat monoclonal IgG2a antibody against mouse CD4, unconjugated

Catalog #60017

500 µg 0.5 mg/mL

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Product Description

The RM4-5 antibody reacts with mouse CD4, an ~55 kDa single-chain type 1 transmembrane glycoprotein and member of the immunoglobin (Ig) superfamily; CD4 contains four extracellular Ig-like domains. CD4 is expressed at relatively high levels by most thymocytes and a subpopulation of T cells (T-helper/inducer cells), and at lower levels on dendritic cells. In the mouse, CD4 is not expressed by monocytes/macrophages. CD4 binds to a non-polymorphic region of MHC II and acts as a co-receptor to the T cell receptor (TCR) in MHC II-restricted antigen recognition by enhancing the avidity of the association between the TCR and MHC II-antigen complex. CD4 also functions to amplify signals from the TCR to the cytoplasm through the interaction of its intracellular domain with cytoplasmic tyrosine kinases such as Lck. Binding of the RM4-5 antibody to CD4 inhibits ligand binding in vitro. Moreover, binding of the RM4-5 antibody can be blocked by the clone GK1.5 antibody.

Target Antigen Name:	CD4
Alternative Names:	L3T4, T4
Gene ID:	12504
Species Reactivity:	Mouse
Host Species:	Rat (DA)
Clonality:	Monoclonal
Clone:	RM4-5
Isotype:	IgG2a, kappa
Immunogen:	BALB/c mouse thymocytes
Conjugate:	Unconjugated

Applications

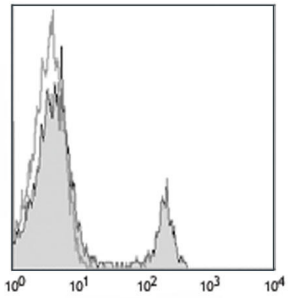
Verified:	FC
Reported:	CyTOF®, FA, FC, ICC, IF, IHC, WB
Special Applications:	This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including EasySep™ Mouse CD4+ T Cell Enrichment Kit (Catalog #19752) and EasySep™ Mouse CD4+ T Cell Isolation Kit (Catalog #19852).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; WB: Western blotting

Properties

Formulation:	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide
Purification:	The antibody was purified by affinity chromatography.
Stability and Storage:	Product stable at 2 - 8°C when stored undiluted. Do not freeze. For product expiry date, please request a lot-specific Certificate of Analysis from techsupport@stemcell.com.
Directions for Use:	For flow cytometry the suggested use of this antibody is ≤ 0.25 µg per 1 x 10e6 cells in 100 µL volume. It is recommended that the antibody be titrated for optimal performance for each application. Clone RM4-5 is not recommended for IHC with formalin-fixed, paraffin-embedded sections.

Data



Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD4 Antibody, Clone RM4-5, followed by anti-rat IgG, FITC (filled histogram) or a rat IgG2a, kappa isotype control antibody followed by anti-rat IgG, FITC (open histogram).

Related Products

PRODUCT NAME	CATALOG #	SIZE
Anti-Mouse CD4 Antibody, Clone RM4-5	60017	500 µg
Anti-Mouse CD4 Antibody, Clone RM4-5, PE	60017PE	200 µg
Anti-Mouse CD4 Antibody, Clone RM4-5, PE	60017PE.1	50 µg
Anti-Mouse CD4 Antibody, Clone RM4-5, Alexa Fluor® 488	60017AD	100 µg
Anti-Mouse CD4 Antibody, Clone RM4-5, Alexa Fluor® 488	60017AD.1	25 µg

References

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3. Bosselut R, et al. Association of the adaptor molecule LAT with CD4 and CD8 coreceptors identifies a new coreceptor function in T cell receptor signal transduction. J Exp Med 190(10): 1517-26, 1999 (IP)
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7. Bourdeau A, et al. TC-PTP-deficient bone marrow stromal cells fail to support normal B lymphopoiesis due to abnormal secretion of interferon-{gamma}. Blood 109(10): 4220-28, 2007 (FC)
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