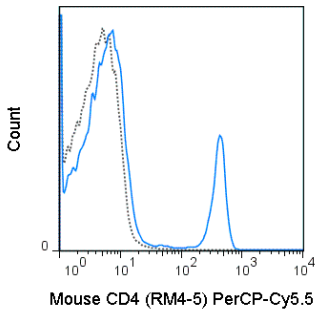
TECHNICAL DATA SHEET

PerCP-Cyanine5.5 Anti-Mouse CD4 (RM4-5)

Catalog Number: 65-0042

PRODUCT INFORMATION

Contents:	PerCP-Cyanine5.5 Anti-Mouse CD4 (RM4-5)
Isotype:	Rat IgG2a, kappa
Concentration:	0.2 mg/mL
Clone:	RM4-5
Reactivity:	Mouse
Use By:	6 months from date of receipt
Storage Conditions:	2-8°C protected from light
Formulation:	10 mM NaH_2PO_4, 150 mM NaCl, 0.09% NaN_3, 0.1% gelatin, pH7.2



C57Bl/6 splenocytes were stained with 0.25 ug PerCP-Cy5.5 Anti-Mouse CD4 (65 -0042) (solid line) or 0.25 ug PerCP-Cy5.5 Rat IgG2a isotype control (dashed line).

DESCRIPTION

The RM4-5 antibody reacts with mouse CD4, a 55 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 beta2-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 is typically expressed on thymocytes, certain mature T cell populations such as Th17 and T regulatory (Treg) cells, as well as on dendritic cells.The RM4-5 antibody is widely used as a phenotypic marker for CD4 expression. If used together, the RM4-5 antibody and an alternative antibody, Anti-Mouse CD4 clone GK1.5, will compete for binding, i.e. RM4-5 antibody is able to block GK1.5 antibody binding to cells. In contrast, RM4-5 antibody does not block the binding of Anti-Mouse CD4 clone RM4-4 to cells.

PREPARATION & STORAGE

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. It is recommended to store the product undiluted at 4°C, and protected from prolonged exposure to light. Do not freeze.

APPLICATION NOTES

This antibody preparation has been quality-tested for flow cytometry using mouse spleen cells, or an appropriate cell type (where indicated). Please refer to the figure legend for the optimal concentration used to stain the tissue shown. We recommend titrating the antibody under your specific conditions to determine the optimal concentration of antibody needed in your experimental system.

REFERENCES

Willinger T and Flavell RA. 2012. Proc. Natl. Acad. Sci. 109:8670-8675. (Flow cytometry)Stephen TL, Wilson BS, and Laufer TM. 2012. Proc. Natl. Acad. Sci. 109: 7415-7420. (Immunofluorescence microscopy)Poitrasson-Riviere M, Bienvenu B, Le Campion A, Becourt C, Martin B, and Lucas B. 2008. J. Immunol. 180:7294-7304. (Immunohistochemistry – paraffin embedded tissue)Sorg H, Lorch B, Jaster R, Fitzner B, Ibrahim S, Holzhueter S, Nizze H, and Vollmar B. 2008. Am. J. Physio. Gastrointest. Liver Physiol. 295: G1274-1280. (Immunohistochemistry - paraffin embedded tissue)Menke J, Lucas JA, Zeller GC, Keir ME, Huang XR, Tsuboi N, Mayadas TN, Lan HY, Sharpe AH, and Kelley VR. 2007. J. Immunol. 179: 7466-7477. (Immunohistochemistry – frozen tissue)Irie J, Wu Y, Wicker LS, Rainbow D, Nalesnik MA, Hirsch R, Peterson LB, Leung PS, Cheng C, Mackay IR, Gershwin ME, and Ridgway WM. 2006. J Exp Med. 203(5):1209-19. (Immunohistochemistry – frozen tissue)Bosselut R, Zhang W, Ashe JM, Kopacz JL, Samelson LE, and Singer A. 1999. J. Exp. Med. 190: 1517-1526. (Immunoprecipitation)Shi Y, Kaliyaperumal A, Lu L, Southwood S, Sette A, Michaels MA, and Datta SK. 1998. J. Exp. Med. 187:367-378. (Blocking)Whiteland JL, Nicholls SM, Shimeld C, Easty DL, Williams NA, and Hill TJ. 1995. J. Histochem. Cytochem. 43:313-320. (Immunohistochemistry – frozen tissue, zinc-fixed paraffin embedded tissue)

Tonbo Biosciences tests all antibodies by flow cytometry. Citations are provided as a resource for additional applications that have not been validated by Tonbo Biosciences. Please choose the appropriate format for each application and consult Materials and Methods sections for additional details about the use of any product in these publications.