

TECHNICAL DATA SHEET

Purified Anti-Mouse CD4 (RM4-5)

Catalog Number: 70-0042

PRODUCT INFORMATION

Contents: Purified Anti-Mouse CD4 (RM4-5)

Isotype: Rat IgG2a, kappa

Concentration: 0.5 mg/mL

Clone: RM4-5

Reactivity: Mouse

Formulation: 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% NaN₃, pH7.2

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 beta-2 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 preparation was purified from tissue culture supernatant via affinity chromatography. For In Vivo Ready™ (IVR) products, each preparation is also evaluated for endotoxin levels using the LAL assay. It is recommended to store the product undiluted at 4°C. Do not freeze.

APPLICATION NOTES

This purified format is guaranteed to be >90% pure as determined by SDS-PAGE analysis. Citations are provided as a convenience to you - please consult Materials and Methods sections for additional details about the use of any product in these publications.

REFERENCES

Willinger T and Flavell RA. 2012. Proc. Natl. Acad. Sci. 109:8670-8675. (flow cytometry)Hofstetter AR, Ford ML, Sullivan LC, Wilson JJ, Hadley A, Brooks AG, and Lukacher AE. 2012. J. Immunol. 188:3071-3079. (in vivo depletion)Becker-Herman A, Meyer-Bahlburg A, Schwartz MA, Jackson SW, Hudkins KL, Liu C, Sather BD, Khim S, Liggitt D, Song W, Silverman GJ, Alpers CE and Rawlings DJ. 2011. J. Exp. Med. 208:2033-2042. (in vivo depletion)Stephen TL, Wilson BS, and Laufer TM. 2012. Proc. Natl. Acad. Sci. 109: 7415-7420. (immunofluorescence microscopy)Poitrasson-Riviere M, Bienvendu 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, Hol-zhueter S, Nizze H, and Vollmar B. 2008. Am. J. Physiol. 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)

NOTE: Please choose the appropriate format for each application. Citations are provided as a convenience to you; please consult Materials and Methods sections for additional details about the use of any product in these publications.

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