TECHNICAL DATA SHEET

In Vivo Ready™ Anti-Mouse CD3 (17A2)

Catalog Number: 40-0032

PRODUCT INFORMATION

Contents: In Vivo Ready™ Anti-Mouse CD3 (17A2)

Isotype: Rat IgG2b, kappa

Concentration: 2 mg/mL

Clone: 17A2

Reactivity: Mouse

Formulation: 10 mM NaH2PO4, 150 mM NaCl, pH7.2

Endotoxin Level: Less than or equal to 0.01 EU/ug, as determined by the LaL assay

DESCRIPTION

The 17A2 antibody reacts with the mouse CD3 complex, comprised of CD3 epsilon, CD3 gamma and CD3 delta. These integral membrane protein chains assemble with additional chains of the T cell receptor (TCR), as well as CD3 zeta chain, to form the T cell receptor – CD3 complex. Together with co-receptors CD4 or CD8, the complex serves to recognize antigens bound to MHC molecules on antigen-presenting cells. Such interactions promote T cell receptor signaling (T cell activation) and can result in a number of cellular responses including proliferation, differentiation, production of cytokines or activation-induced cell death. CD3 is differentially expressed during thymocyte-to-T cell development and on all mature T cells.The 17A2 antibody is a widely used phenotypic marker for mouse T cells. In addition, as the CD3e chain within the TCR complex contains intracellular signaling domains, binding of 17A2 antibody to CD3 can induce cell activation. A recent publication of the crystal structure of a murine CD3e-mitogenic antibody complex provides further insight into the action of commonly used agonist antibodies (Fernandes, R.A. et al. 2012. Journal of Biological Chemistry. 287: 13324-13335).

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

Joetham A, Ohnishi H, Okamoto M, Takeda K, Schedel M, Domenico J, Dakhama A, and Gelfand EW. 2012. J. Biol. Chem. 287:17100-17108. (in vitro activation)Kasahara S and Clark, EA. 2012. J. Leukoc. Biol. 91:437-448. (in vitro activation)Xiao J, Julianty A, Wen J, Smith SV, Park PW, Ford ML, Haller CA, and Chaikof EL. 2012. Arterioscler. Thromb. Vasc. Biol. 32:386-396. (in vivo T cell depletion) Bas A, Swamy M, Abeler-Dorner L, Williams G, Pang DJ, Barbee SD, and Hayday AC. 2011 Proc. Natl. Acad. Sci. 108: 4376-4381. (immunohistochemistry - Paraffin embedded sections)Miescher GC, Schreyer M, and MacDonald HR. 1989. Immunol. Lett. 23: 113-118. (Origination of clone 17A2, Functional Assay, immunohistochemistry, immunoprecipitation)

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.