

TECHNICAL DATA SHEET

Biotin Anti-Mouse CD3e (145-2C11)

Catalog Number: 30-0031

PRODUCT INFORMATION

Contents: Biotin Anti-Mouse CD3e (145-2C11)

Isotype: Armenian Hamster IgG

Concentration: 0.5 mg/mL

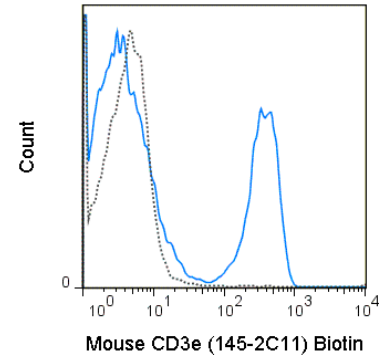
Clone: 145-2C11

Reactivity: Mouse

Use By: 12 months from date of receipt

Storage Conditions: 2-8°C protected from light

Formulation: 10 mM NaH₂PO₄, 150 mM NaCl, 0.09% NaN₃, pH 7.2



C57Bl/6 splenocytes were stained with 0.125 ug Biotin Anti-Mouse CD3e (30-0031) (solid line) or 0.125 ug Biotin Armenian Hamster IgG isotype control (dashed line), followed by Streptavidin PE.

DESCRIPTION

The 145-2C11 antibody is specific for mouse CD3e, also known as CD3 epsilon, a 20 kDa subunit of the T cell receptor complex, along with 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 145-2C11 antibody is a widely used phenotypic marker for mouse T cells. In addition, binding of 145-2C11 antibody to CD3e 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. J. Biol. Chem. 287: 13324-13335).

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

Staeihl R, Ludigs K, Heinz LX, Sequin-Estevéz Q, Ferero I, Braun M, Schroder K, Rebsamen M, Tardivel A, Mattmann C, MacDonald HR, Romero P, Reith W, Guarda G, and Tschopp J. 2012. J. Immunol. 188: 3820-3828. (in vitro activation) Todo T, Wu G, Chai NN, He Y, Martins G, Gupta A, Fair J, Liu NY, Jordan S, and Klein A. 2012. Int. Immunol. 10:1093. (in vivo assay) Mira E, Leon B, Barber DF, Jimenez-Baranda S, Goya I, Almonacid L, Marquez G, Zaballos A, Martinez C, Stein JV, Ardavin C and Manes S. 2012. J. Immunol. 181(5): 3524-3534. (in vitro activation, Immunohistochemistry – frozen tissue) 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. (Immunofluorescence microscopy – OCT embedded frozen tissue) Salmond RJ, Filby A, Pirinen N, Magee AI, and Zamoyska R. 2010. Blood. 117: 108-117. (Immunoprecipitation) Tilley SL, Jaradat M, Stapleton C, Dixon D, Hua X, Erikson CJ, McCaskill JG, Chason KD, Liao G, Jania L, Koller BH, and Jetten AM. 2007. J. Immunol. 178: 3208-18. (Immunohistochemistry – frozen tissue) Isakov N, Wange RL, Burgess WH, Watts JD, Aebersold R, and Samelson LE. 1995. J. Exp. Med. 181:375-380. (in vitro activation, Immunoprecipitation) Salvadori S, Gansbacher B, Pizzimenti AM, and Zier KS. 1994. J. Immunol. 153: 5176 - 5182. (Western Blotting) Leo O, Foo M, Sachs D, Samuelsen L, and Bluestone J. 1987. Proc. Natl. Acad. Sci. USA. 84: 1374 (Origination of clone 145-2C11, in vitro activation, in vitro blocking, Immunoprecipitation)

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.

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