# Anti-Mouse CD3e Antibody, Clone 145-2C11

### **Antibodies**

Hamster (Armenian) monoclonal IgG1 antibody against mouse CD3e,

unconjugated

Catalog #60015 500 μg 0.5 mg/mL



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## **Product Description**

The 145-2C11 antibody reacts with the ~20 kDa CD3 $\epsilon$  subunit of the mouse T cell receptor (TCR)/CD3 complex, which is expressed on the surface of circulating mature T cells and NKT cells, and variably on thymocytes. A majority of T cell neoplasms also express CD3. The CD3 complex, which is assembled from combinations of CD3 $\gamma$ ,  $\delta$ ,  $\epsilon$ ,  $\eta$ , and  $\zeta$  subunits, associates non-covalently with the TCR and is involved in transducing antigen recognition signals into the cytoplasm of T cells and in regulating the cell surface expression of the TCR. Activation of T cells by the TCR involves the cytoplasmic tails of the CD3 subunits, which are structurally related type 1 transmembrane proteins and members of the immunoglobulin superfamily. Mutations in the CD3 subunits have been associated with various immunodeficiency disorders including severe combined immunodeficiency (SCID). The 145-2C11 antibody has been used for in vitro functional (blocking and activation) assays and has been reported to block binding by the clone 17A2 antibody. The 145-2C11 antibody is not recommended for use with formalin-fixed, paraffin-embedded sections.

Target Antigen Name: CD3e

Alternative Names: CD3, CD3epsilon, T3

Gene ID: 12501 Species Reactivity: Mouse

Host Species: Hamster (Armenian)

Clonality: Monoclonal
Clone: 145-2C11
Isotype: IgG1, kappa

Immunogen: H-2Kb-specific mouse cytotoxic T lymphocyte clone BM10-37

Conjugate: Unconjugated

# **Applications**

Verified: FC

Reported: FA, FC, ICC, IF, IHC, IP, WB

Special Applications: This antibody clone has been verified for purity assessments of cells isolated with EasySep™ kits, including

EasySep™ Mouse T Cell Isolation Kit (Catalog #19851) and EasySep™ Mouse CD90.2 Positive Selection Kit II

(Catalog #18951).

Abbreviations: CellSep: Cell separation; ChIP: Chromatin immunoprecipitation; FA: Functional assay; FACS: Fluorescence-activated cell sorting; FC: Flow cytometry; ICC: Immunocytochemistry; IF: Immunofluorescence microscopy; IHC: Immunohistochemistry; IP: Immunoprecipitation; RIA: Radioimmunoassay; 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 contact

techsupport@stemcell.com.

Directions for Use: For flow cytometry, the suggested use of this antibody is ≤ 1 µg per 1 x 10<sup>6</sup> cells in 100 µL. It is

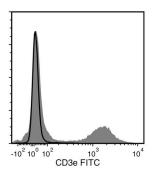
recommended that the antibody be titrated for optimal performance for each application.

#### Anti-Mouse CD3e Antibody, Clone 145-2C11

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#### Data



Flow cytometry analysis of C57BL/6 mouse splenocytes labeled with Anti-Mouse CD3e Antibody, Clone 145-2C11, followed by an anti-hamster IgG antibody, FITC (filled histogram), or a hamster (Armenian) IgG isotype control antibody followed by an anti-hamster IgG antibody, FITC (solid line histogram).

#### Related Products

For a complete list of antibodies, including other conjugates, sizes and clones, as well as related products available from STEMCELL Technologies, please visit our website at www.stemcell.com/antibodies or contact us at techsupport@stemcell.com.

#### References

- 1. Xia CQ et al. (2014) Anti-CD3 antibody treatment induces hypoglycemia and super tolerance to glucose challenge in mice through enhancing glucose consumption by activated lymphocytes. J Immunol Res 2014: 1–11. (FA)
- 2. Shiheido H et al. (2014) Novel CD3-specific antibody induces immunosuppression via impaired phosphorylation of LAT and PLCγ1 following T-cell stimulation. Eur J Immunol 44(6): 1770–80. (FA, FC)
- 3. Loubaki L et al. (2013) In vivo depletion of leukocytes and platelets following injection of T cell-specific antibodies into mice. J Immunol Methods 393(1-2): 38–44. (FA/Depletion, FC)
- 4. Qi Q et al. (2009) Enhanced development of CD4+ gammadelta T cells in the absence of ltk results in elevated IgE production. Blood 114(3): 564–71. (FACS, FC)
- 5. Chappaz S et al. (2007) Increased TSLP availability restores T- and B-cell compartments in adult IL-7 deficient mice. Blood 110(12): 3862–70. (FC, IF, IHC)
- 6. Takeuchi A et al. (2005) CCR5-deficient mice develop experimental autoimmune uveoretinitis in the context of a deviant effector response. Invest Ophthalmol Vis Sci 46(10): 3753–60. (IF, IHC)
- 7. Schuchert MJ et al. (2000) Characterization of a newly discovered T-cell receptor beta-chain heterodimer expressed on a CD8+ bone marrow subpopulation that promotes allogeneic stem cell engraftment. Nat Med 6(8): 904–9. (FC, IP)
- 8. Castro JE et al. (1996) Fas modulation of apoptosis during negative selection of thymocytes. Immunity 5(6): 617–27. (FA/Activation)
- 9. Salvadori S et al. (1994) Abnormal signal transduction by T cells of mice with parental tumors is not seen in mice bearing IL-2-secreting tumors. J Immunol 153(11): 5176–82. (FA/Activation, FC, WB)
- 10. Payer E et al. (1991) Circulating CD3+/T cell receptor V gamma 3+ fetal murine thymocytes home to the skin and give rise to proliferating dendritic epidermal T cells. J Immunol 146(8): 2536–43. (FACS, FC, IF, IHC)
- 11. Portoles P et al. (1989) Monoclonal antibodies to murine CD3 epsilon define distinct epitopes, one of which may interact with CD4 during T cell activation. J Immunol 142(12): 4169–75. (FA, IP)
- 12. Leo O et al. (1987) Identification of a monoclonal antibody specific for a murine T3 polypeptide. Proc Natl Acad Sci USA 84(5): 1374-8. (FA, FC, IP)

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