

TECHNICAL DATA SHEET

violetFluor™ 450 Anti-Human CD3 (SK7)

Catalog Number: 75-0036

PRODUCT INFORMATION

Contents: violetFluor™ 450 Anti-Human CD3 (SK7)

Isotype: Mouse IgG1, kappa

Concentration: 5 µL (1.0 µg)/test

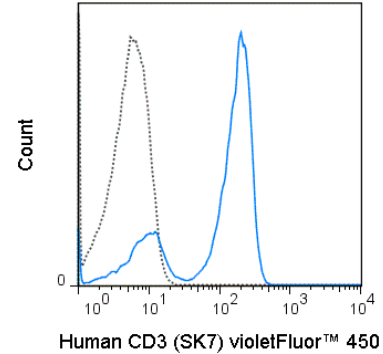
Clone: SK7

Reactivity: Human

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, 0.1% gelatin, pH7.2



Human peripheral blood lymphocytes were stained with 5 µL (1 µg) violetFluor™ 450 Anti-Human CD3 (75-0036) (solid line) or 1 µg violetFluor™ 450 Mouse IgG1 isotype control.

DESCRIPTION

The SK7 antibody is specific for human CD3ε, 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. These interactions promote T cell receptor signaling (T cell activation), inducing cell 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 SK7 antibody is a widely used phenotypic marker for human T cells. This antibody may induce T cell activation in the presence of monocytes. The antibody has also been demonstrated to be cross-reactive with Chimpanzee CD3. Binding of clone SK7 can be blocked by an alternative Anti-Human CD3 clone, OKT3. Please choose the appropriate format for each application.

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 pre-titrated and quality-tested for flow cytometry using an appropriate cell type. The antibody has been diluted for use at 5 µL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 µL. The number of cells within a sample should be determined empirically, but typically ranges between 1x10⁵ to 1x10⁸ cells.

violetFluor™ 450 dye is excited by the violet (405 nm) laser and has a peak emission of 450 nm. The most common band pass filters for this dye are 440/40 or 450/50. violetFluor™ 450 can be used as an alternative for Pacific Blue®, BD Horizon™ V450 or eFluor® 450.

REFERENCES

McMichael AJ, Beverly PCL, Gilks W, et al, ed. Leukocyte Typing III: White Cell Differentiation Antigens. New York: Oxford University Press; 1987.
 Kaneoka H, Perez-Rojas G, Sasasaki T, Benike CJ and Engleman EG. 1983. J Immunol. 131: 158–164. (in vitro activation)
 Haringman JJ, Vinkenoog M, Gerlag DM, Smeets TJM, Zwinderman AH and Tak PP. 2005. Arthritis Res Ther. 7(4): R862-R867. (Immunohistochemistry – frozen tissue)
 Goval J-J, Greimers R, Boniver J and de Leval L. 2006. J Histochem Cytochem. 54(1): 75-84. (Immunofluorescence – frozen tissue)
 Wrann CD, Laue T, Hubner L, Kuhlmann S, Jacobs R, Goudeva L and Nave H. 2012. Am J Physiol Endocrinol Metab. 302(1): E108-E116. (Flow Cytometry)
 Soto PC, Stein LL, Hurtado-Ziola N, Hedrick SM and Varki A. 2010. J Immunol. 184(8): 4185-4195. (Flow Cytometry – Chimpanzee)

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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