TECHNICAL DATA SHEET

violetFluor™ 450 Anti-Human CD8a (OKT8)

Catalog Number: 75-0086

PRODUCT INFORMATION

Contents: violetFluor™ 450 Anti-Human CD8a (OKT8)

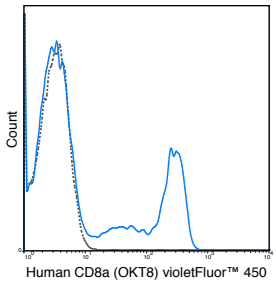
Isotype: Mouse IgG2a

Concentration: 5 uL (0.125 ug)/test

Clone: OKT8

Reactivity: Human

Formulation: 10 mM NaH2PO4, 150 mM NaCl, 0.09% NaN3, 0.1% gelatin, pH7.2



Human peripheral blood lymphocytes were stained with 5 uL (0.125 ug) violetFluor™ 450 Anti-Human CD8a (75-0086) (solid line) or 0.125 ug violetFluor™ 450 Mouse IgG2a isotype control (dashed line).

DESCRIPTION

The OKT8 antibody is specific for the 32-34 kDa alpha chain of human CD8, known as CD8a or CD8 alpha. CD8a can form a homodimer (CD8 alpha-alpha), but is more commonly expressed as a heterodimer with a second chain known as CD8b or CD8 beta. CD8 acts as a co-receptor for antigen recognition and subsequent T cell activation that is initiated upon binding of the T cell receptor (TCR) to antigen-bearing MHC Class I molecules. The cytoplasmic domains of CD8 provide binding sites for the tyrosine kinase lck, facilitating intracellular signaling events that lead to T cell activation, development, and cytotoxic effector functions. CD8+ cytotoxic T cells (CTLs) play an important role in inducing cell death of tumor cells, as well as cells infected by virus, bacteria or parasites. The OKT8 antibody is widely used as a phenotypic marker for CD8 on cytotoxic T cells, thymocytes, as well as on certain cell types that do not also express the TCR, including some NK cells and lymphoid dendritic cells. If used together with alternative antibodies Anti-Human CD8a clone RPA-T8 or Anti-Human CD8a clone Hit8a, the OKT8 antibody will not block binding of RPA-T8 or Hit8a.

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 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 uL per test, defined as the amount of antibody that will stain a cell sample in a final volume of approximately 100 uL. The number of cells within a sample should be determined empirically, but typically ranges between 1x10e5 to 1x10e8 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

Jahnke M, Trowsdale J, and Kelly AP. 2012. J. Biol. Chem. 287: 28779-28789. (Flow Cytometry, Immunoprecipitation) Clement M, Ladell K, Ekeruche-Makinde J, Miles JJ, Edwards ESJ, Dolton G, Williams T, Schauenburg AJA, Cole DK, Lauder SN, Gallimore AM, Godkin AJ, Burrows SR, Price DA, Sewell AK, and Wooldridge L. 2011. J. Immunol. 187: 654-663. (in vitro activation) Bagnara D, Kaufman MS, Calissano C, Marsilio S, Patten PEM, Simone R, Chum P, Yan X-Y, Allen SL, Kolitz JE, Baskar S, Radar C, Mellstedt H, Rabbani H, Lee A, Gregersen PK, Rai KR, and Chiorazzi N. 2011. Blood. 117: 5463-5472. (in vivo activation) Teles RMB, Krutzik SR, Ochoa MT, Oliveira RB, Sarno EN, and Modlin RL. 2010. 78: 4634-4643. (Immunohistochemistry – OCT embedded frozen tissue) Lai AY, Fatemi M, Dhasarathy A, Malone C, Sobol SE, Geigerman C, Jaye DL, Mav D, Shah R, Li L, and Wade PA. 2010. J. Exp. Med. 207: 1939-1950. (in vitro T Varghese JC and Kane KP. 2008. J. Immunol. 181: 6002-6009. (in vitro blocking) cell depletion) Thakral D, Dobbins J, Devine L, and Kavathas PB. 2008. J. Immunol. 180:7431-7442. (Immunoprecipitation)

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