TONBO biosciences

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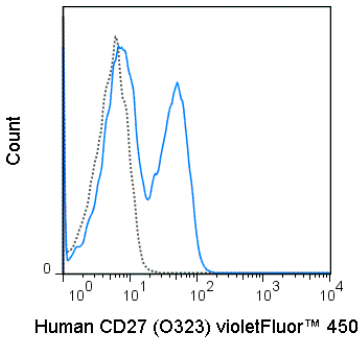
TECHNICAL DATA SHEET

violetFluor™ 450 Anti-Human CD27 (O323)

Catalog Number: 75-0279

PRODUCT INFORMATION

Contents:	violetFluor™ 450 Anti-Human CD27 (O323)
Isotype:	Mouse IgG1, kappa
Concentration:	5 µL (0.125 µg)/test
Clone:	O323
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 CD27 (O323) violetFluor™ 450

Human peripheral blood lymphocytes were stained with 5 uL (0.125 ug) violetFluor™ 450 Anti-Human CD27 (75-0279) (solid line) or 0.125 ug violetFluor™ 450 Mouse IgG1 isotype control.

DESCRIPTION

The O323 antibody reacts with human CD27 (TNFRSF7), a cell surface homodimer of 55 kDa subunits, which provides co-stimulatory signaling in support of the T cell (TCR) and B cell (BCR) receptors. By comparison with CD28, whose TCR co-stimulatory signal can trigger cell proliferation, CD27 signaling appears to promote cell survival and differentiation to effector / memory stages. Also in contrast with CD28, the CD27 receptor may be shed following interaction with its ligand CD70, which is typically expressed on activated dendritic cells, T cells and B cells. With respect to B cells, CD27 is considered to be a phenotypic marker for memory B cells. CD27 has been included within a group of phenotypic markers for identifying human B regulatory cells (Bregs), a cell type proposed to regulate CD4+ T cell proliferation and Foxp3 / CTLA-4 expression in Treg cells.The O323 antibody may be used for analysis of CD27 expression on peripheral T cells, and is frequently used in combination with antibodies for IgD and IgM to distinguish naïve vs. memory B cell populations. For identification of Breg cells, this antibody has been used in combination with antibodies for CD25, CD1d, IL-10 and TGF-beta (Kessel et al. 2012. Autoimm. Rev. 11(9): 670-677). The antibody is also reported for cross-reactivity with Baboon, Cynomolgus and Rhesus CD27.

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 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

Kroenke MA, Eto D, Locci M, Cho M, Davidson T, Haddad EK, and Crotty S. 2012. J. Immunol. 188: 3734-3744. (Flow cytometry)

Ruffell B, Au A, Rugo HS, Esserman LJ, Hwang ES, and Coussens LM. 2012. Proc. Natl. Acad. Sci. 109: 2796-2801. (Flow cytometry)

Strowig T, Tongvaux A, Rathinam C, Takizawa H, Borsotti C, Philbrick W, Eynon EE, Manz, MG, and Flavell RA. 2011. Proc. Natl. Acad. Sci. 108: 13218-13223. (Flow cytometry)

So NSY, Ostrowski MA and Gray-Owen SD. 2012. J. Immunol. 188: 4008-4022. (Flow cytometry)

Klatt NR, Vinton CL, Lynch RM, Canary LA, Ho J, Darrah PA, Estes JD, Seder RA, Moir SL, and Brenchley JM. 2011. Blood. 118: 5803-5812. (Cell sorting – Rhesus)

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.