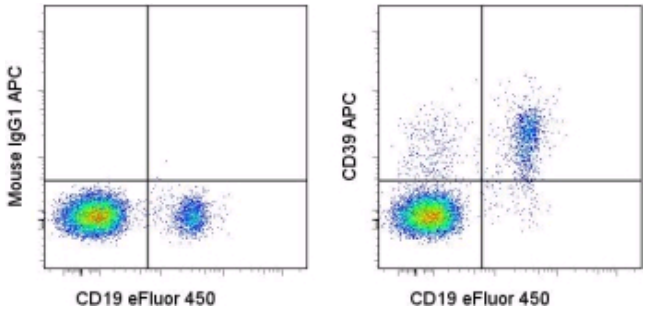
full spectrum cell analysis®
eBioscience®

Anti-Human CD39 APC

Catalog Number: 17-0399
Also Known As:Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1
RUO: For Research Use Only



Staining of normal human peripheral blood cells with Anti-Human CD19 eFluor® 450 (cat. 48-0199) and Mouse IgG1 κ Isotype Control APC (cat. 17-4714) (left) or Anti-Human CD39 APC (right). Cells in the lymphocyte gate were used for analysis.

Product Information

Contents: Anti-Human CD39 APC
REF Catalog Number: 17-0399
Clone: eBioA1 (A1)
Concentration: 5 µl (0.125 µg)/test
Host/Isotype: Mouse IgG1

Formulation: aqueous buffer, 0.09% sodium azide, may contain carrier protein/stabilizer
Temperature Limitation: Store at 2-8°C. Do not freeze. Light sensitive material.
LOT Batch Code: Refer to Vial
Use By: Refer to Vial

Description

The eBioA1 monoclonal antibody reacts with human CD39 also known as ectonucleoside triphosphate diphosphohydrolase 1 (ENTPD1) or NTPDase. CD39 is an integral membrane protein with two transmembrane domains and exists as a homotetramer. It is the most prominent ectoenzyme of the immune system. The function of CD39 is to effectively remove toxic extracellular ATP by converting it to ADP or AMP. CD39 is thought to work together with CD73 to hydrolyze ATP and has been well characterized on Langerhans cells. Expression of CD39 was originally identified on activated lymphocytes. Expression is also found on a subset of T cells, B cells and dendritic cells as well as weak staining on monocytes and granulocytes.

Recently, CD39 and CD73 have been found on regulatory T cells (Treg). Expression of CD39 on Treg may facilitate their entry into inflamed areas where high levels of ATP are present. Expression of CD39 on Foxp3+CD4+ cells ranges from 25-45%.

Applications Reported

This eBioA1 (A1) antibody has been reported for use in flow cytometric analysis.

Applications Tested

This eBioA1 (A1) antibody has been pre-titrated and tested by flow cytometric analysis of normal human peripheral blood cells. This can be used at 5 µL (0.125 µg) per test. A test is defined as the amount (µg) of antibody that will stain a cell sample in a final volume of 100 µL. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test.

References

Lyck L, Dalmau I, et al. 2008. Immunohistochemical markers for quantitative studies of neurons and glia in human neocortex. J Histochem Cytochem. 56(3):201-21. (A1, IHC frozen, PubMed)

Borsellino G, Kleinewietfeld M, Di Mitri D, Sternjak A, Diamantini A, Giometto R, Hopner S, Centonze D, Bernardi G, Dell'acqua ML, Rossini PM, Battistini L, Rotzschke O, Falk K. 2007. Expression of ectonucleotidase CD39 by Foxp3+ Treg cells: hydrolysis of extracellular ATP and immune suppression. Blood. 110(4):1225-32.

Stockl J., O. Majdic, G. Fischer, D. Maurer, W. Knapp. 2001. Monomorphic Molecules Function as Additional Recognition Structures on Haptenated Target Cells for HLA-A1-Restricted, Hapten-Specific CTL. J. Immunol. 167L:2724-2733

Aversa GG., J.A. Waugh, G.A. Bishop, B.M. Hall. 1989. Use of Monoclonal Antibodies to Study in vivo and in vitro-activated Lymphocytes. Transplant Proc. 21(1):349-50.

Aversa GG., M.G. Suranyi, J.A. Waugh, A.G. Bishop, B.M. Hall. 1988. Detection of a Late Lymphocyte Activation Marker by A1, a New Monoclonal Antibody. Transplant Proc. 20(1):49-52.

Related Products

17-4714 Mouse IgG1 K Isotype Control APC

Tel: 888.999.1371 or 858.642.2058 • Fax: 858.642.2046 • www.eBioscience.com • info@eBioscience.com