

Anti-Human CD39 PE-Cyanine7

Catalog Number: 25-0399

Also known as: Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1 RUO: For Research Use Only. Not for use in diagnostic procedures.



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 (0.25 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 10⁵ to 10⁸ cells/test.

Light sensitivity: This tandem dye is sensitive photo-induced oxidation. Please protect this vial and stained samples from light.



Anti-Human CD39 PE-Cyanine7

Catalog Number: 25-0399

Also known as: Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1 RUO: For Research Use Only. Not for use in diagnostic procedures.

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 uL cell sample + 100 uL IC Fixation Buffer) or 1-step Fix/Lyse Solution (cat. 00-5333) for up to 3 days in the dark at 4°C with minimal impact on brightness and FRET efficiency/compensation. Some generalizations regarding fluorophore performance after fixation can be made, but clone specific performance should be determined empirically.

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 vitroactivated 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

17-0199 Anti-Human CD19 APC (HIB19) 25-4714 Mouse IgG1 K Isotype Control PE-Cyanine7 (P3.6.2.8.1)

Legal

FOR NON-COMMERCIAL RESEARCH USE ONLY. NOT FOR THERAPEUTIC OR IN VIVO APPLICATIONS. OTHER USE NEEDS LICENSE FROM GE HEALTHCARE BIO-SCIENCES CORP. UNDER U.S. PATENT FOR NON-COMMERCIAL RESEARCH USE ONLY. NOT FOR THERAPEUTIC OR IN VIVO APPLICATIONS. OTHER USE NEEDS LICENSE FROM GE HEALTHCARE BIO-SCIENCES CORP. UNDER U.S. PATENT # 5,268,486, 5,569,587 AND 5,627,027 AND FOREIGN EQUIVALENTS AND PENDING APPLICATIONS. THIS MATERIAL IS SUBJECT TO PROPRIETARY RIGHTS OF GE HEALTHCARE BIO-SCIENCES CORP. AND CARNEGIE MELLON UNIVERSITY AND MADE AND SOLD UNDER LICENSE FROM GE HEALTHCARE BIO-SCIENCES CORP. THIS PRODUCT IS LICENSED FOR SALE ONLY FOR RESEARCH. IT IS NOT LICENSED FOR ANY OTHER USE. THERE IS NO IMPLIED LICENSE HEREUNDER FOR ANY COMMERCIAL USE. COMMERCIAL USE shall include: 1. sale, lease, license or other transfer of the material or any material derived or produced from it; 2. sale, lease, license or other grant of rights to use this Material or any material derived or produced from it; 3. use of this material to perform services for a fee for third parties. IF YOU REQUIRE A COMMERCIAL LICENSE TO USE THIS MATERIAL AND DO NOT HAVE ONE, RETURN THIS MATERIAL, UNOPENED TO EBIOSCIENCE, INC. 10255 SCIENCE CENTER DRIVE, SAN DIEGO, CALIFORNIA 92121 USA AND ANY MONEY PAID FOR THE MATERIAL WILL BE REFUNDED.