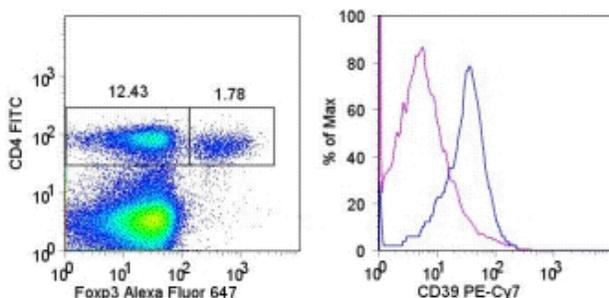


Anti-Mouse CD39 PE-Cyanine7

Catalog Number: 25-0391

Also Known As: Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1

RUO: For Research Use Only. Not for use in diagnostic procedures.



Surface staining of mouse splenocytes with Anti-Mouse CD4 FITC (cat. 11-0041) and 0.125 μ g of Anti-Mouse CD39 PE-Cyanine7 (right), followed by intracellular staining with Anti-Mouse Fc γ 3 Alexa Fluor® 647. Gating for the CD4+Fc γ 3- cells (purple histogram) and CD4+Fc γ 3+ cells (blue histogram) is demonstrated on the dot plot (left).

Product Information

Contents: Anti-Mouse CD39 PE-Cyanine7

REF **Catalog Number:** 25-0391

Clone: 24DMS1

Concentration: 0.2 mg/mL

Host/Isotype: Rat IgG2b, kappa

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. This tandem dye is sensitive to photo-induced oxidation. Protect this vial from light during storage, handling & experimental procedures.



LOT **Batch Code:** Refer to Vial



Use By: Refer to Vial



Contains sodium azide

Description

The 24DMS1 monoclonal antibody reacts with mouse CD39, also known as NTPDase1. E-NTPDases are enzymes that convert nucleoside tri- and diphosphates (NTPDs) into nucleoside monophosphate (NMP), thereby removing toxic extracellular ATP and ADP. CD39 is the dominant member of this family in the immune system and is involved in suppression of inflammation and control of platelet activation. CD39 can impact expression of CD73, another E-NTPase. Together, these molecules influence inflammation responses. CD39 is expressed on B cells, Langerhans cells and most monocytes. In addition, CD39 is found on a subset of CD4+ T cells that are mostly CD25+FoxP3+ T reg cells. T reg cells from CD39-null mice showed impaired suppressive properties *in vitro* and *in vivo*.

Applications Reported

This 24DMS1 antibody has been reported for use in flow cytometric analysis.

Applications Tested

This 24DMS1 antibody has been tested by flow cytometric analysis of mouse splenocytes. This can be used at less than or equal to 0.25 μ g per test. A test is defined as the amount (μ g) of antibody that will stain a cell sample in a final volume of 100 μ L. Cell number should be determined empirically but can range from 10^5 to 10^8 cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

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

Fixation: Samples can be stored in IC Fixation Buffer (cat. 00-8222) (100 μ L cell sample + 100 μ L IC Fixation Buffer) or 1-step Fix/Lyze 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

Hyman MC, Petrovic-Djergovic D, Visovatti SH, Liao H, Yanamadala S, Bouis D, Su EJ, Lawrence DA, Broekman MJ, Marcus AJ, Pinsky DJ. Self-regulation of inflammatory cell trafficking in mice by the leukocyte surface apyrase CD39. *J Clin Invest.* 2009 May;119(5):1136-49. (24DMS1, FC, PubMed)

Bynoe MS, Viret C. Fc γ 3+CD4+ T cell-mediated immunosuppression involves extracellular nucleotide catabolism. *Trends Immunol.* 2008 Mar;29(3):99-102.

Borsellino G, Kleinewietfeld M, Di Mitri D, Sternjak A, Diamantini A, Giometto R, Höpner S, Centonze D, Bernardi G, Dell'Acqua ML, Rossini PM,

Battistini L, Röttschke O, Falk K. Expression of ectonucleotidase CD39 by Foxp3+ Treg cells: hydrolysis of extracellular ATP and immune suppression. *Blood*. 2007 Aug 15;110(4):1225-32.

Deaglio S, Dwyer KM, Gao W, Friedman D, Usheva A, Erat A, Chen JF, Enjoji K, Linden J, Oukka M, Kuchroo VK, Strom TB, Robson SC. Adenosine generation catalyzed by CD39 and CD73 expressed on regulatory T cells mediates immune suppression. *J Exp Med*. 2007 Jun 11;204(6):1257-65.

Mizumoto N, Kumamoto T, Robson SC, Sévigny J, Matsue H, Enjoji K, Takashima A. CD39 is the dominant Langerhans cell-associated ecto-NTPDase: modulatory roles in inflammation and immune responsiveness. *Nat Med*. 2002 Apr;8(4):358-65.

Sévigny J, Sundberg C, Braun N, Guckelberger O, Csizmadia E, Qawi I, Imai M, Zimmermann H, Robson SC. Differential catalytic properties and vascular topography of murine nucleoside triphosphate diphosphohydrolase 1 (NTPDase1) and NTPDase2 have implications for thromboregulation. *Blood*. 2002 Apr 15;99(8):2801-9.

Braun N, Sévigny J, Robson SC, Enjoji K, Guckelberger O, Hammer K, Di Virgilio F, Zimmermann H. Assignment of ecto-nucleoside triphosphate diphosphohydrolase-1/cd39 expression to microglia and vasculature of the brain. *Eur J Neurosci*. 2000 Dec;12(12):4357-66.

Enjoji K, Sévigny J, Lin Y, Frenette PS, Christie PD, Esch JS 2nd, Imai M, Edelberg JM, Rayburn H, Lech M, Beeler DL, Csizmadia E, Wagner DD, Robson SC, Rosenberg RD. Targeted disruption of cd39/ATP diphosphohydrolase results in disordered hemostasis and thromboregulation. *Nat Med*. 1999 Sep;5(9):1010-7.

Related Products

00-5523 Foxp3 / Transcription Factor Staining Buffer Set

11-0041 Anti-Mouse CD4 FITC (GK1.5)

25-4031 Rat IgG2b K Isotype Control PE-Cyanine7

50-5773 Anti-Mouse/Rat Foxp3 eFluor® 660 (Alexa Fluor® 647 Replacement) (FJK-16s)

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.

Not for further distribution without written consent.

Copyright © 2000-2012 eBioscience, Inc.

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