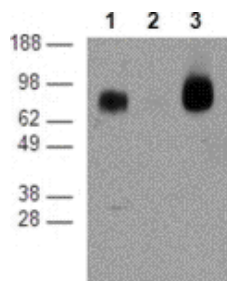


## Anti-Mouse CD39 Purified

**Catalog Number:** 14-0391

**Also Known As:** Ectonucleoside Triphosphate Diphosphohydrolase 1, Entpd1

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



Cell lysates prepared from mouse spleen (lane 1), thymocytes (lane 2), or bone marrow (lane 3) were resolved by SDS-PAGE prior to transfer onto a PVDF membrane. The membrane was probed with 2 ug/ml Anti-Mouse CD39 Purified and bands were detected using an HRP-conjugated anti-rat IgG antibody. Note: This antibody works only with non-reduced protein without boiling prior to gel loading.

### Product Information

**Contents:** Anti-Mouse CD39 Purified

**REF** **Catalog Number:** 14-0391

**Clone:** 24DMS1

**Concentration:** 0.5 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.



**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, and immunoblotting (WB).

### Applications Tested

This 24DMS1 antibody has been tested by flow cytometric analysis of mouse splenocytes and by WB. This can be used at less than or equal to 0.06 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<sup>5</sup> to 10<sup>8</sup> cells/test. It is recommended that the antibody be carefully titrated for optimal performance in the assay of interest.

### References

Hyman MC, Petrovic-Djergovic D, Visovatti SH, Liao H, Yanamadala S, Bouïs 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. Foxp3+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, Enjyoji 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.

Enjyoji 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**

14-4031 Rat IgG2b K Isotype Control Purified

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