

**PE/Dazzle™ 594 anti-human CD39**

**Catalog # / Size:** 2241120 / 100 tests  
2241115 / 25 tests

**Clone:** A1

**Isotype:** Mouse IgG1, κ

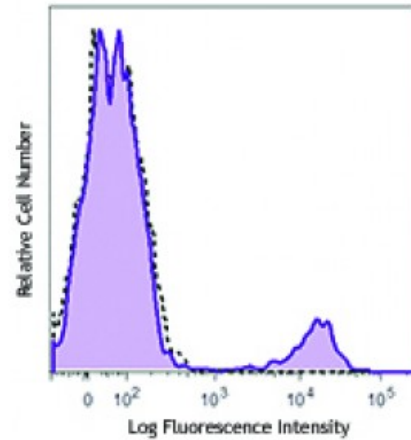
**Immunogen:** PHA activated human lymphocytes

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with PE/Dazzle™ 594 under optimal conditions. The solution is free of unconjugated PE/Dazzle™ 594 and unconjugated antibody.

**Formulation:** Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide and 0.2% (w/v) BSA (origin USA).

**Concentration:** Lot-specific



Human peripheral blood lymphocytes were stained with CD39 (clone A1) PE/Dazzle™ 594 (filled histogram) or mouse IgG1, κ PE/Dazzle™ 594 isotype control (open histogram).

**Applications:**

**Applications:** Flow Cytometry

**Recommended Usage:** Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. For flow cytometric staining, the suggested use of this reagent is 5 microL per million cells or 5 microL per 100 microL of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

\* PE/Dazzle™ 594 has a maximum excitation of 566 nm and a maximum emission of 610 nm.

**Application Notes:** The A1 antibody binds to the human CD39 cell surface antigen and has been shown to block MHC independent target cell recognition by hapten-specific CTL. Additional reported applications (for the relevant formats) include: *in vitro* CD39 blockade<sup>3</sup>, immunofluorescence<sup>4</sup>, and immunohistochemistry<sup>6</sup>. The LEAF™ purified antibody (Endotoxin <0.1 EU/microg, Azide-Free, 0.2 μm filtered) is recommended for blocking assays ([contact our custom solutions team](#)).

- Application References:**
1. Aversa GG, *et al.* 1988. *Transplant. P.* 20:4952.
  2. Aversa GG, *et al.* 1989. *Transplant. P.* 21:34950.
  3. Borsellino G, *et al.* 2007. *Blood.* 110:1225. (Block)
  4. Stockl J, *et al.* 2001. *J. Immunol.* 167:2724. (IF)
  5. Sestak K, *et al.* 2007. *Vet. Immunol. Immunopathol.* 119:21.
  6. Lyck L, *et al.* 2008. *J. Histochem. Cytochem.* 56:201. (IHC)

**Description:** Human CD39 is an integral membrane protein with two transmembrane domains. It exists as a homotetramer. Expression of CD39 is found on activated lymphocytes, a subset of T cells and B cells, and dendritic cells with weak staining on monocytes and granulocytes. CD39 and CD73 have been found on regulatory T cells, specifically the effector/memory like T cells. CD39 can hydrolyze both nucleoside triphosphates and diphosphates. CD39 is the dominant ecto nucleotidase of vascular and placental trophoblastic tissues and appears to

modulate the functional expression of type 2 purinergic (P2) G protein coupled receptors (GPCRs). CD39 has intrinsic ecto-ATPase activity. Expression of CD39 is induced on T cells and increased on B cells as a late activation antigen.