

# APC/Fire™ 750 anti-human CD39

**Catalog # /** 2241150 / 100 tests  
**Size:** 2241145 / 25 tests

**Clone:** A1

**Isotype:** Mouse IgG1, κ

**Immunogen:** PHA activated human lymphocytes

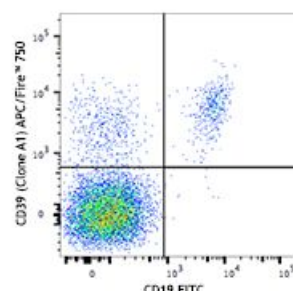
**Reactivity:** Human, Other

**Preparation:** The antibody was purified by affinity chromatography and conjugated with APC/Fire™

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

**Workshop Number:** 750 under optimal conditions.

**Concentration:** Lot-specific



Human peripheral blood lymphocytes were stained with CD19 FITC and CD39 (clone A1) APC/Fire™ 750 (top) or mouse IgG1, κ APC/Fire™ 750 isotype control (bottom).

## Applications:

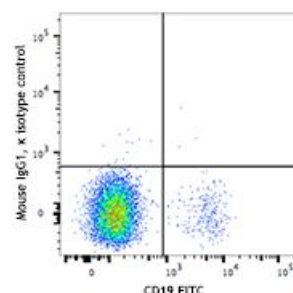
**Applications:** Flow Cytometry

**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 0.25 µl per million cells in 100 µl staining volume or 5 µl per 100 µl of whole blood.

\* APC/Fire™ 750 has a maximum excitation of 650 nm and a maximum emission of 787 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>.

- 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.

**Antigen**  
**References:**

1. Reche PA, et al. 2001. *J. Immunol.* 167:336.
2. Tonozyuka Y, et al. 2001. *Cytogenet. Cell. Genet.* 93:23.
3. Zhang W, et al. 2001. *Biochem. Biophys. Res. Commun.* 281:878.
4. Wang YH, et al. 2006. *Immunity* 24:827.