

APC/Fire™ 750 anti-human CD45

Catalog # / Size: 2120305 / 25 tests
2120310 / 100 tests

Clone: HI30

Isotype: Mouse IgG1, κ

Immunogen: Human T cells from a T-ALL patient.

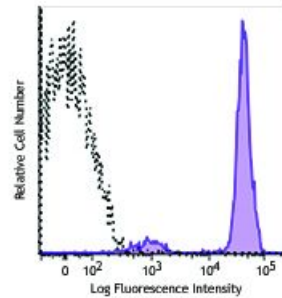
Reactivity: Human, Other

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 CD45 (clone HI30) APC/Fire™ 750 (filled histogram), or mouse IgG1, κ APC/Fire™ 750 isotype control (open histogram).

Applications:

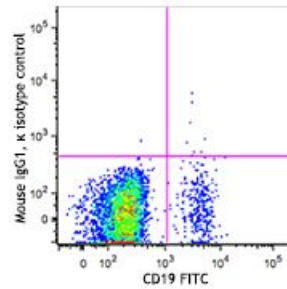
Applications: Flow Cytometry

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 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: Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections⁹, inhibition of CD45 functions⁴, immunofluorescence¹¹, and Western blotting³.

It was found that the HI30 clone and the 2D1 clone can cross block each other's binding.



Human peripheral blood lymphocytes were stained with anti-human CD4 FITC and anti-human CD25 (clone M-A251) Spark YG™ 581 (left) or anti-human CD4 FITC only (right).

**Application
References:**

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 3. Esser M, et al. 2001. *J. Virol.* 75:6173. (WB)
 4. Yamada T, et al. 2002. *J. Biol. Chem.* 277:28830.
 5. Nagano M, et al. 2007. *Blood* 110:151.
 6. Jiang Q, et al. 2008. *Blood* 112:2858. [PubMed](#)
 7. Morozov A, et al. 2010. *Clin Cancer Res.* 16:5630. [PubMed](#)
 8. Yoshino N, et al. 2000. *Exp. Anim. (Tokyo)* 49:97. (FC)
 9. Friedman T, et al. 1999. *J. Immunol.* 162:5256. (IHC)
 10. Oeztuerk-Winder F, et al. 2012. *EMBO J.* 31:3431. (FC) [PubMed](#)
 11. Rees LE, et al. 2003. *Clin. Exp. Immunol.* 134:497. (IF)
 12. Lee J, et al. 2015. *J Exp Med.* 212:385. [PubMed](#)
 13. Breton G, et al. 2015. *J Exp Med.* 212:401. [PubMed](#)
 14. Marquardt N, et al. 2015. *J Immunol.* 6:2467. [PubMed](#)
 15. Bushway ME, et al. 2014. *Biol Reprod.* 90(5): 110. (IF) [PubMed](#)
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Description:

CD45 is a 180-240 kD single chain type I membrane glycoprotein also known as leukocyte common antigen (LCA) and T200. It is a tyrosine phosphatase expressed on the plasma membrane of all hematopoietic cells, except erythrocytes and platelets. CD45 is a signaling molecule that regulates a variety of cellular processes including cell growth, differentiation, cell cycle, and oncogenic transformation. CD45 plays a critical role in T and B cell antigen receptor-mediated activation by dephosphorylating substrates including p56Lck, p59Fyn, and other Src family kinases. CD45 non-covalently associates with lymphocyte phosphatase-associated phosphoprotein (LPAP) on T and B lymphocytes. CD45 has been reported to bind galectin-1 and to be associated with several other cell surface antigens including CD1, CD2, CD3, and CD4.

**Antigen
References:**

1. Thomas M. 1989. *Annu. Rev. Immunol.* 7:339.
2. Trowbridge I, et al. 1994. *Annu. Rev. Immunol.* 12:85.