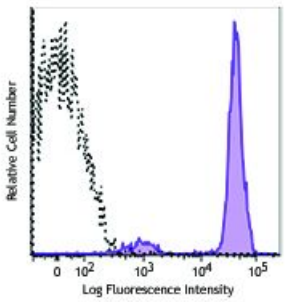
SONY

Product Data Sheet

APC/Fire™ 750 anti-human CD45

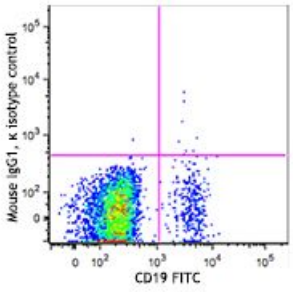
Catalog # / Size:	2120310 / 100 tests 2120305 / 25 tests
Clone:	HI30
Isotype:	Mouse IgG1, κ
Immunogen:	Human T cells from a T-ALL patient.
Reactivity:	Human, Other
Preparation:	The antibody was purified by affinity chromatography and conjugated with APC/Fire&trade
Formulation:	Phosphate-buffered solution, 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 sections[9], inhibition of CD45 functions[4], immunofluorescence[11], and Western blotting[3]. 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:

1. Knapp W, *et al.* 1989. Leucocyte Typing IV. Oxford University Press. New York.
2. Kishihara K, *et al.* 1993. *Cell* 74:143.
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.