SONY

Product Data Sheet

APC anti-human CD45

Catalog # / Size: 2120055 / 25 tests
2120060 / 100 tests
2120185 / 500 tests

Clone: HI30

Isotype: Mouse IgG1, κ

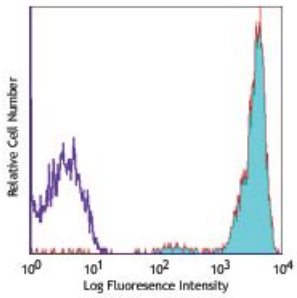
Reactivity: Human

Preparation: The antibody was purified by affinity chromatography, and conjugated with APC under optimal conditions.

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

Workshop Number: IV N816

Concentration: Lot-specific



Human peripheral blood lymphocytes stained with HI30 APC

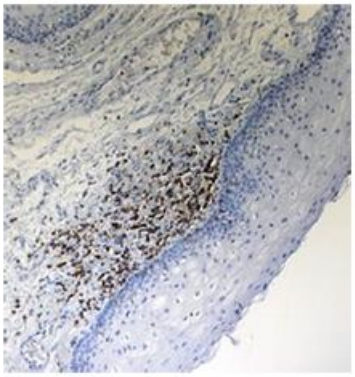
Applications:

Applications: Flow Cytometry

Recommended Usage: Each lot of this antibody is quality control tested by immunofluorescent staining with flow cytometric analysis. **Test size products are transitioning from 20 µl to 5 µl per test**. Please check your vial or your CoA to find the suggested use of this reagent per million cells in 100 µl staining volume or per 100 µl of whole blood. It is recommended that the reagent be titrated for optimal performance for each application.

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 functions4, immunofluorescence[11], and Western blotting3.

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



Preparation and staining of formalin fixed paraffin-embedded (FFPE) human tonsil was performed. After antigen retrieval, the sample was incubated with the purified monoclonal antibody (clone HI30) at 0.5 µg/mL for 20 minutes. The Ultra Streptavidin (USA) HRP Detection Kit (Multi-Species, DAB) was used according to protocol for chromogenic detection.

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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.
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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.

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