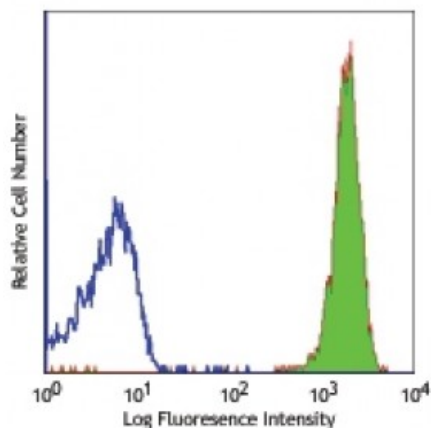


**Purified anti-human CD45**

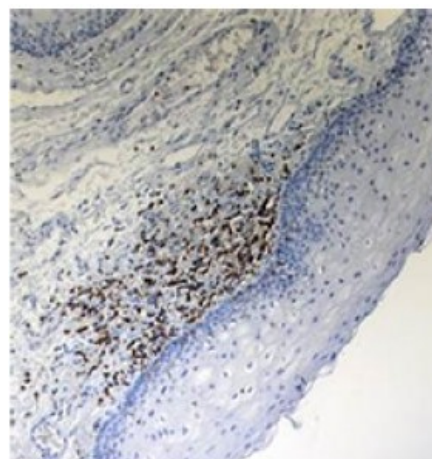
<b>Catalog # / Size:</b>	2120010 / 100 µg 2120005 / 25 µg
<b>Clone:</b>	HI30
<b>Isotype:</b>	Mouse IgG1, κ
<b>Reactivity:</b>	Human
<b>Preparation:</b>	The antibody was purified by affinity chromatography.
<b>Formulation:</b>	Phosphate-buffered solution, pH 7.2, containing 0.09% sodium azide.
<b>Workshop Number:</b>	IV N816
<b>Concentration:</b>	0.5



Human peripheral blood lymphocytes were stained with purified CD45 (clone HI30) (filled histogram) or purified mouse IgG1, κ isotype control (open histogram), followed by anti-mouse IgG FITC.

**Applications:**

<b>Applications:</b>	Other
<b>Recommended Usage:</b>	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 $\leq 0.5$ microg per $10^6$ cells in 100 microL volume or 100 microL of whole blood. For immunohistochemical staining, a concentration range of 0.1 - 10 microg/ml is suggested, if the antibody is not available in a pre-diluted format. It is recommended that the reagent be titrated for optimal performance for each application.
<b>Application Notes:</b>	Additional reported applications (for the relevant formats) include: immunohistochemical staining of acetone-fixed frozen tissue sections and formalin-fixed paraffin-embedded tissue sections <sup>9</sup> , inhibition of CD45 functions <sup>4</sup> , immunofluorescence <sup>11</sup> , and Western blotting <sup>3</sup> .  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 microg/mL for 20 minutes. The Ultra Streptavidin

<b>Application References:</b>	1. Knapp W, <i>et al.</i> 1989. Leucocyte Typing IV. Oxford University Press. New York. 2. Kishihara K, <i>et al.</i> 1993. <i>Cell</i> 74:143. 3. Esser M, <i>et al.</i> 2001. <i>J. Virol.</i> 75:6173. (WB)
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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** 1. Thomas M. 1989. *Annu. Rev. Immunol.* 7:339.  
**References:** 2. Trowbridge I, *et al.* 1994. *Annu. Rev. Immunol.* 12:85.