

**Spark Blue™ 550 anti-human CD45**

**Catalog # / Size:** 2442745 / 25 tests  
2442750 / 100 tests

**Clone:** 2D1

**Isotype:** Mouse IgG1, κ

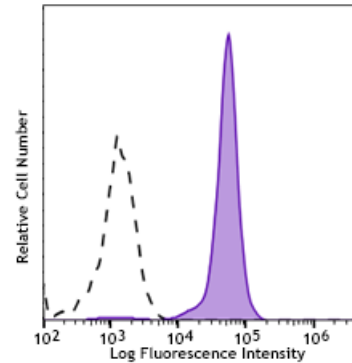
**Immunogen:** Human PBMC

**Reactivity:** Human

**Preparation:** The antibody was purified by affinity chromatography and conjugated with Spark Blue™ 550 under optimal conditions.

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

**Concentration:** Lot-specific



Human peripheral blood lymphocytes were stained with CD45 (clone 2D1) Spark Blue™ 550 (filled histogram). Open histogram represents unstained cells.

**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. It is recommended that the reagent be titrated for optimal performance for each application.

\* Spark Blue™ 550 has a maximum excitation of 516 nm and a maximum emission of 540 nm.

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

- Application References:**
1. Bradstock KF, et al. 1980. *J. Natl. Cancer Inst.* 65:33.
  2. Csiba A, et al. 1984. *Br. J. Cancer* 50:699.
  3. Tchilian EZ, et al. 2001. *J. Immunol.* 166:1308.
  4. Lee MS, et al. 2004. *Int. Immunol.* 16:1109.

**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 or 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.