

Anti-Human CD45 (HI30)-111Cd

Catalog number, package size: 3111001B, 100 tests
3111001C, 25 tests

Clone: HI30

Other Names: LCA, T200

Isotype: Mouse IgG1, κ

Reactivity: Human, Chimpanzee

Tag: 111Cd

Formulation: Antibody stabilizer with 0.1% preservative

Storage: Store at 2–8 °C. Do not freeze.

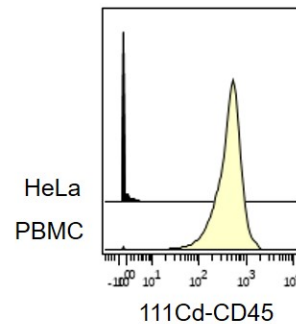
Application: CyTOF® suspension mass cytometry

Technical Information

Description: CD45, also known as leukocyte common antigen (LCA) and T200, is a type I transmembrane glycoprotein. It is expressed on the plasma membrane of all hematopoietic cells, except mature red blood cells, platelets, and plasma cells. Its intracellular domain is a tyrosine phosphatase that serves to regulate signal transduction in most hematopoietic cells.

Application: The metal-tagged antibody is designed and formulated for the application of suspension mass cytometry using the Fluidigm CyTOF suspension systems on healthy human PBMC.

Validation: Each lot of conjugated antibody is quality control-tested by CyTOF suspension mass cytometry analysis of stained cells using appropriate positive and negative cell staining and/or activation controls.



Human HeLa cells (top) and human PBMC (bottom) were stained with anti-CD45 (HI30)-111Cd. Total viable cells are displayed in the analysis.

Recommended use: Use 1 μ L for up to 3×10^6 live cells in 100 μ L staining volume. We recommend titrating the antibody for optimal performance for each of the desired applications. Centrifuge the stock antibody at $12,000 \times g$ for 5 min to sediment antibody aggregates. Fixation is typically used in intracellular staining protocols or in barcoding with the Cell-ID™ 20-Plex Pd Barcoding Kit (PN 201060). However, fixing before antibody staining can affect epitope structure and antibody binding, with the impact varying on the type and concentration of fixative and the protocol used. It is therefore important to perform a small, preliminary antibody staining experiment, with and without fixation, using non-critical samples.

NOTE The 106Cd and 110Cd metal isotopes are not compatible for use with the Cell-ID 20-Plex Pd Barcoding Kit due to direct mass overlap with the 106Pd and 110Pd metal isotopes in the barcoding kit.

Applicable Protocols

Before using this product, refer to the instructions in the Maxpar® Cell Surface Staining with Fresh Fix Protocol (400276).

References

Bandura, D.R. et al. "Mass cytometry: technique for real time single cell multitarget immunoassay based on inductively coupled plasma time-of-flight mass spectrometry." *Analytical Chemistry* 81 (2009): 6,813–22.

Bendall, S.C. et al. "Single-cell mass cytometry of differential immune and drug responses across a human hematopoietic continuum." *Science* 332 (2011): 687–696.

Bodenmiller, B. et al. "Multiplexed mass cytometry profiling of cellular states perturbed by small-molecule regulators." *Nature Biotechnology* 30 (2012): 858–867.

Ornatsky, O.I. et al. "Highly multiparametric analysis by mass cytometry." *Journal of Immunological Methods* 361 (2010): 1–20.

Safety

Use standard laboratory safety protocols. Read and understand the safety data sheets (SDSs) before handling chemicals. To obtain SDSs, go to fluidigm.com and search for SDS-00021.

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