

Anti-Hu CD45 Purified PTPRC Monoclonal Antibody

Catalog Number: M00555-3

About PTPRC

CD45 (LCA, leukocyte common antigen) is a receptor-type protein tyrosine phosphatase ubiquitously expressed in all nucleated hematopoietic cells, comprising approximately 10% of all surface proteins in lymphocytes. CD45 glycoprotein is crucial in lymphocyte development and antigen signaling, serving as an important regulator of Src-family kinases. CD45 protein exists as multiple isoforms as a result of alternative splicing; these isoforms differ in their extracellular domains, whereas they share identical transmembrane and cytoplasmic domains. These isoforms differ in their ability to translocate into the glycosphingolipid-enriched membrane domains and their expression depends on cell type and physiological state of the cell. Besides the role in immunoreceptor signaling, CD45 is important in promoting cell survival by modulating integrin-mediated signal transduction pathway and is also involved in DNA fragmentation during apoptosis.

Overview

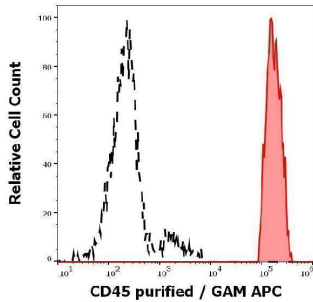
Product Name	Anti-Hu CD45 Purified PTPRC Monoclonal Antibody
Reactive Species	Human
Description	Boster Bio Anti-Hu CD45 Purified PTPRC Monoclonal Antibody (Catalog# M00555-3). Tested in Flow Cytometry, IP, WB, IHC-P, ICC application(s). This antibody reacts with Human.
Application	Flow Cytometry, IP, IHC-P, ICC, WB
Clonality	Monoclonal MEM-28
Formulation	Phosphate buffered saline (PBS), pH 7.4, 15 mM sodium azide
Storage Instructions	Store at 2-8°C. Do not freeze.
Host	Mouse
Uniprot ID	P08575

Technical Details

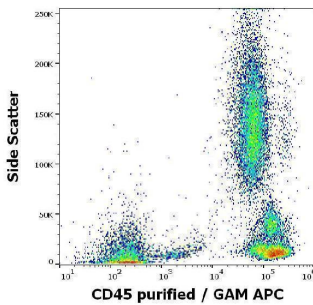
Immunogen	Human thymocytes and T lymphocytes. The antibody MEM-28 reacts with an extracellular epitope on all alternative forms of human CD45 antigen (Leukocyte Common Antigen), a 180-220 kDa single chain type I transmembrane protein expressed at high level on all cells of hematopoietic origin, except erythrocytes and platelets.
Predicted Reactive Species	Primate
Isotype	Mouse IgG1
Form	Liquid
Concentration	1 mg/ml

Purification	Purified by protein-A affinity chromatography.
Suggested Dilutions	Immunohistochemistry (paraffin sections): No pre-treatment of tissue sections is needed. Immunocytochemistry: Recommended dilution: 10 ug/ml; paraformaldehyde fixation can be used. Western blotting: non-reducing conditions; recommended dilution: 1 ug/ml; 6-7% gel recommended (band around 180-250 kDa). Flow cytometry: Recommended dilution: 1 ug/ml.

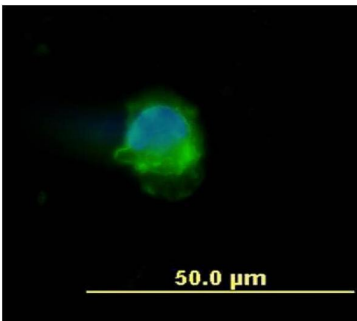
Anti-Hu CD45 Purified PTPRC Monoclonal Antibody (M00555-3) Images



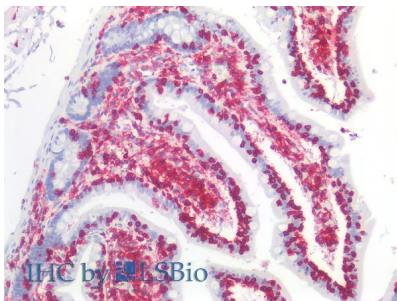
Separation of human lymphocytes (red-filled) from CD45 negative blood debris (black-dashed) in flow cytometry analysis (surface staining) of human peripheral whole blood stained using anti-human CD45 (MEM-28) purified antibody (concentration in sample 2 µg/ml) GAM APC.



Flow cytometry surface staining pattern of human peripheral whole blood stained using anti-human CD45 (MEM-28) purified antibody (concentration in sample 2 µg/ml) GAM APC.

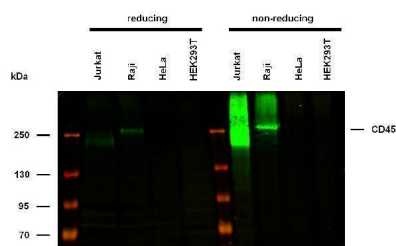


Immunocytochemistry staining of human peripheral blood mononuclear cell using anti-human CD45 (MEM-28, green). DNA visualized by DAPI (blue)



Immunohistochemistry staining of human small intestine (paraffin-embedded sections) with anti-CD45 (MEM-28), 10 µg/ml. Commercially tested by LifeSpan BioSciences.

Anti-Hu CD45 Purified (clone MEM-28) works in WB application under non-reducing conditions. Western blotting analysis was performed on whole cell extracts (RIPA lysis buffer) of Jurkat, Raji, HeLa, and HEK293T cell lines, mixed and heated (100°C, 5 min) with reducing and non-reducing SDS-loading buffer. Samples were resolved using 7% SDS-PAGE gel. Nitrocellulose membrane blot was probed with mouse IgG1 monoclonal antibody MEM-28 (1 µg/ml),



followed by IRDye 800CW Goat-anti-Mouse IgG (green). Multiplex fluorescent Western blot detection was performed. CD45 molecules were detected at ~180-250 kDa in Jurkat and Raji cell lines.

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