BECKMAN COULTER
MADE IN France

IOTest
Conjugated Antibody
CD45RA-Alexa Fluor 700

	Specifications
Specificity	CD45RA
Clone	2H4LDH11LDB9 (2H4)
Hybridoma	NS1 x balb/c
Immunogen	T lymphocyte derived from Aotus trivirgatus
Isotype	IgG1
Species	Mouse
Purification	Affinity Chromatography
Fluorochrome	Alexa Fluor 700
Molar ratio	Alexa Fluor 700 / Ig: 2.7-4.7
λ excitation	695 nm
Emission Peak	720 nm
Buffer	PBS pH 7.2 plus 2 mg / mL BSA and 0.1% NaN_3

REF B90396 Liquid - 0.5 mL

Analyte Specific Reagent.
Analytical and performance characteristics are not established

REAGENTS
Concentration: See lot specific Certificate of Analysis at www.beckmancoulter.com.

WARNING AND PRECAUTIONS
1. This reagent contains 0.1% sodium azide. Sodium azide under acid conditions yields hydrazoic acid, an extremely toxic compound. Azide compounds should be flushed with running water while being discarded. These precautions are recommended to avoid deposits in metal piping in which explosive conditions can develop. If skin or eye contact occurs, wash excessively with water.
2. Specimens, samples and all material coming in contact with them should be considered potentially infectious and disposed of with proper precautions.
3. Never pipet by mouth and avoid contact of samples with skin and mucous membranes.
4. Do not use antibody beyond the expiration date on the label.
5. Do not expose reagents to strong light during storage or incubation.
6. Avoid microbial contamination of reagents or incorrect results might occur.
7. Use good laboratory practices when handling this reagent.
8. Any change in the physical appearance of the reagents may indicate deterioration and the reagent should not be used.

GHS HAZARD CLASSIFICATION
Not classified as hazardous

STORAGE AND HANDLING CONDITIONS AND STABILITY
This reagent is stable up to the expiration date when stored at 2 – 8°C. Do not freeze.

No reconstitution is necessary. This monoclonal antibody may be used directly from the vial. Bring reagent to 18 – 25°C prior to use.

SPECIFICITY
The leukocyte common antigen (CD45) is a transmembrane-type protein tyrosine phosphatase heavily glycosylated with five isoforms and expressed at high levels on nucleated hematopoietic cells, from stem cells to memory cells with the exclusion of megakaryocyte/platelet and erythroid series. CD45 isoforms (functionally similar proteins with similar but not identical amino acid sequence), including CD45RA, are generated by

alternative mRNA splicing of exons 4 (CD45RA), 5 (CD45RB) and 6 (CD45RC), leading to changes in the extracellular domain of the molecule (1). The extracellular domain of CD45 is highly polymorphic, and the isoforms expression is associated with autoimmune and infectious diseases, establishing CD45 as an important immunomodulator with a significant influence on disease burden (2).

CD45RA is also called protein tyrosine phosphatase receptor type C and expressed at higher percentage as CD45RA helper T cells in cord blood than adult blood (3, 4).

2H4LDH11LDB9 (2H4) monoclonal antibody was evaluated during the 3rd and the 4th HLDA workshop on Human Leukocyte Differentiation in Oxford (1986) and Vienna (1989) respectively (5). 2H4LDH11LDB9 (2H4) monoclonal antibody is restricted to the CD45RA antigen (6, 7).

TRADEMARKS

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Alexa Fluor is a trademark of Molecular Probes, Inc.

ADDITIONAL INFORMATION

For additional information, or if damaged product is received, call Beckman Coulter Customer Service at 800-526-7694 (USA or Canada) or contact your local Beckman Coulter Representative.

REFERENCES

1. Streuli M, Hall LR, Saga Y, Differential usage of three exons generates at least five different mRNAs encoding human leukocyte common antigens. J Exp Med. 1987 Nov 1; 166(5):1548-66.
2. Pike KA1, Tremblay ML. Regulating naïve and memory CD8 T cell homeostasis–a role for protein tyrosine phosphatases. FEBS J. 2013 Jan; 280(2):432-44.
3. D'Arena G, Musto P, Cascavilla N, et al. Flow cytometric characterization of human umbilical cord blood lymphocytes: immunophenotypic features. Haematologica. 1998 Mar; 83(3):197-203.
4. Motley D, Meyer MP, King RA, Determination of lymphocyte immunophenotypic values for normal full-term cord blood. Am J Clin Pathol. 1996 Jan; 105(1):38-43.
5. Schlossman, S.F., Morimoto, C., Streuli, M., Anderson, P., Rudd, C., "Surface structures defining functional T-cell subsets", 1989, Leucocyte Typing IV, White Cell Differentiation Antigens, 1070-1073.
6. Streuli, M., Morimoto, C., Schrieber, M., Schlossman, S.F., Saito, H., "Characterization of CD45 and CD45R monoclonal antibodies using transfected mouse cell lines that express individual human leukocyte common antigens", 1988, J. Immunol., 141, 3910-3914.
7. Mosmann, T.R., Sad, S., "The expanding universe of T-cell subsets : Th1, Th2 and more", 1996, Immunol. Today, 17, 138-146.

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