

# CD45RO [UCL-1]

Concentrated and Prediluted Monoclonal Antibody  
902-006-091217

**BIOCARE**  
M E D I C A L

<b>Catalog Number:</b>	<b>ACR 006 B, C</b>	<b>APR 006 AA</b>
<b>Description:</b>	0.5, 1.0 ml, concentrated	6.0 ml, prediluted
<b>Dilution:</b>	1:100	Ready-to-use
<b>Diluent:</b>	Da Vinci Green	N/A

## Intended Use:

For Research Use Only. Not for use in diagnostic procedures.

## Summary and Explanation:

CD45RO recognizes a 180 kDa protein, identified as isoform of leukocyte common antigen (CD45RO) (4th Leukocyte Typing Workshop: Code No. N31). UCL-1 reacts with mature activated T-cells, most thymocytes, and a sub-population of resting T-cells within both CD4 and CD8 subsets. UCL-1 shows no reactivity with normal B-cells or natural killer cells, but reacts with granulocytes and monocytes. Reportedly, UCL-1 is useful for the identification of normal T-cells and T-cell lymphomas.

## Principle of Procedure:

Antigen detection in tissues and cells is a multi-step immunohistochemical process. The initial step binds the primary antibody to its specific epitope. After labeling the antigen with a primary antibody, a secondary antibody is added to bind to the primary antibody. An enzyme label is then added to bind to the secondary antibody; this detection of the bound antibody is evidenced by a colorimetric reaction.

**Source:** Mouse monoclonal

**Species Reactivity:** Human; others not tested

**Clone:** UCL-1

**Isotype:** IgG2a/kappa

**Total Protein Concentration:** ~10 mg/ml. Call for lot specific Ig concentration.

**Epitope/Antigen:** CD45RO

**Cellular Localization:** Cell membrane

**Positive Tissue Control:** Tonsil or T-cell lymphoma

**Known Applications:**

Immunohistochemistry (formalin-fixed paraffin-embedded tissues)

**Supplied As:** Buffer with protein carrier and preservative

**Storage and Stability:**

Store at 2°C to 8°C. Do not use after expiration date printed on vial. If reagents are stored under conditions other than those specified in the package insert, they must be verified by the user. Diluted reagents should be used promptly; any remaining reagent should be stored at 2°C to 8°C.

## Staining Protocol Recommendations:

**Peroxide Block:** Block for 5 minutes with Biocare's Peroxidase 1.

**Pre-treatment:** Perform heat retrieval using Biocare's Reveal or Diva Decloaker. Refer to the Reveal or Diva Decloaker product data sheet for specific instructions.

**Protein Block (Optional):** Incubate for 5-10 minutes at RT with Biocare's Background Punisher.

**Primary Antibody:** Incubate for 30 minutes at RT.

**Probe:** Incubate for 10 minutes at RT with a secondary probe.

**Polymer:** Incubate for 10-20 minutes at RT with a tertiary polymer.

**Chromogen:**

Incubate for 5 minutes at RT with Biocare's DAB – OR – Incubate for 5-7 minutes at RT with Biocare's Warp Red.

**Counterstain:**

Counterstain with hematoxylin. Rinse with deionized water. Apply Tacha's Bluing Solution for 1 minute. Rinse with deionized water.

**Technical Note:**

This antibody has been standardized with Biocare's MACH 4 detection system. Use TBS buffer for washing steps.

## Limitations:

This product is provided for Research Use Only (RUO) and is not for use in diagnostic procedures. Suitability for specific applications may vary and it is the responsibility of the end user to determine the appropriate application for its use.

## Precautions:

1. This antibody contains less than 0.1% sodium azide. Concentrations less than 0.1% are not reportable hazardous materials according to U.S. 29 CFR 1910.1200, OSHA Hazard communication and EC Directive 91/155/EC. Sodium azide (NaN<sub>3</sub>) used as a preservative is toxic if ingested. Sodium azide may react with lead and copper plumbing to form highly explosive metal azides. Upon disposal, flush with large volumes of water to prevent azide build-up in plumbing. (Center for Disease Control, 1976, National Institute of Occupational Safety and Health, 1976) (5)

2. Specimens, before and after fixation, and all materials exposed to them should be handled as if capable of transmitting infection and disposed of with proper precautions. Never pipette reagents by mouth and avoid contacting the skin and mucous membranes with reagents and specimens. If reagents or specimens come into contact with sensitive areas, wash with copious amounts of water. (6)

3. Microbial contamination of reagents may result in an increase in nonspecific staining.

4. Incubation times or temperatures other than those specified may give erroneous results. The user must validate any such change.

5. Do not use reagent after the expiration date printed on the vial.

6. The SDS is available upon request and is located at <http://biocare.net>.

## Technical Support:

Contact Biocare's Technical Support at 1-800-542-2002 for questions regarding this product.

## References:

1. Kurtin PJ, Roche PC. Immunoperoxidase staining of non-Hodgkin's lymphomas for T-cell lineage associated antigens in paraffin sections. Comparison of the performance characteristics of four commercially available antibody preparations. *American Journal of Surgical Pathology*. 1993; 17(9):898-904.

2. Clark JR, Williams ME, Swerdlow SH. Detection of B- and T-cells in paraffin-embedded tissue sections. Diagnostic utility of commercially obtained 4KB5 and UCL-1. *American Journal of Clinical Pathology*. 1990; 93(1):58-69.

3. Nagatani T, *et al.* Comparative study of cutaneous T-cell lymphoma and adult T-cell leukemia/lymphoma. Clinical, histopathologic, and immunohistochemical analyses. *Cancer*. 1990; 66(11):2380-6.

4. Ootaka T, *et al.* Analysis of leukocyte surface antigens on ethanol-fixed paraffin-embedded tissue material. *Journal of Immunological Methods*. 1990; 131(2):183-93.

5. Center for Disease Control Manual. Guide: Safety Management, NO. CDC-22, Atlanta, GA. April 30, 1976 "Decontamination of Laboratory Sink Drains to Remove Azide Salts."

6. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory Workers from Occupationally Acquired Infections; Approved guideline-Fourth Edition CLSI document M29-A4 Wayne, PA 2014.



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Rev: 062117

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