

## CD79a

Concentrated and Prediluted Monoclonal Antibody  
Control Number: 902-067-090717

<b>Catalog Number:</b>	ACR 067 A,C	APR 067 AA
<b>Description:</b>	0.1, 1.0 ml, concentrated	6.0 ml, prediluted
<b>Dilution:</b>	1:50 -1:100	Ready-to-use
<b>Diluent:</b>	Van Gogh Yellow	N/A

**Intended Use:**

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

**Summary and Explanation:**

CD79a is an intracellular component of the signal transduction pathway of the B-cell Receptor (BCR). CD79a first appears at pre-B-cell stage, early in maturation. It persists until the plasma cell stage, when it is found as an intracellular component. CD79a is found in the majority of acute leukemias of precursor-B-cell type (2). It is also found in B-cell lines, B-cell lymphomas, and in some myelomas (1-6). It is not present in myeloid or T-cell lines (1-2). In a study, when tested on a total of 454 paraffin-embedded tissues, it reacted with 97% of B-cell neoplasms. This antibody labels precursor B-cell acute lymphoblastic leukemia samples, making it the most reliable B-cell marker for this disorder (7). It is therefore highly recommended that CD79a be used in conjunction with CD20 [L26] for the identification of B-cell neoplasms. CD79a for B-cell is conserved across many species. Therefore, this antibody may be useful to aid in the identification of lymphocyte subsets in species other than human.

**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 and rat

**Clone:** HM47/A9

**Isotype:** IgG1/kappa

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

**Epitope/Antigen:** CD79a

**Cellular Localization:** Cell membrane

**Positive Control:** Germinal center B-cells in lymph node or tonsil.

**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 Peroxidized 1.

**Pretreatment Solution (recommended):** Reveal

**Pretreatment Protocol:**

Heat Retrieval Method:

Retrieve sections under pressure at using Biocare's Decloaking Chamber, followed by a wash in distilled water; alternatively, steam tissue sections for 45-60 minutes. Allow solution to cool for 10 minutes then wash in distilled water.

**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 minutes at RT with a tertiary polymer.

**Staining Protocol Recommendations Cont'd:**

**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. It can also be used on an automated staining system and with other Biocare polymer detection kits. Use TBS 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) (8)
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 in contact with sensitive areas, wash with copious amounts of water. (9)
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 MSDS is available upon request and is located at <http://biocare.net/support/msds/>.

**Technical Support:**

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

**References:**

1. Milner RJ, *et al.* Immunophenotypic classification of canine malignant lymphoma on formalin-fixed paraffin wax-embedded tissue by means of CD3 and CD79a cell markers. *Onderstepoort J Vet Res.* 1996 Dec; 63(4):309-13.
2. Astsaturov IA, *et al.* Differential expression of B29 (CD79b) and mb-1 (CD79a) proteins in acute lymphoblastic leukaemia. *Leukemia.* 1996 May;10(5):769-73.
3. Ashton-Key M, *et al.* Follicular Hodgkin's disease. *Am J Surg Pathol.* 1995 Nov;19(11):1294-9.
4. Chetty R, *et al.* Immunohistochemistry in apparently normal bone marrow trephine specimens from patients with nodal follicular lymphoma. *J Clin Pathol.* 1995 Nov;48:1035-8.
5. Hashimoto S, *et al.* Alternative splicing of CD79a (Igalph/mb-1) and CD79b (Igbeta/B29) RNA transcripts in human B cells. *Mol Immunol.* 1995 Jun;32(9):651-9.
6. Hemsley SW, *et al.* Immunohistological staining of lymphoid tissue in four Australian marsupial species using species cross-reactive antibodies. *Immunol Cell Biol.* 1995 Aug;73(4):321-5.
7. Mason Dy, *et al.* CD79a: a novel marker for B-cell neoplasms in routinely processed tissue samples. *Blood.* 1995 Aug 15;86(4):1453-9.
8. 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."
9. Clinical and Laboratory Standards Institute (CLSI). Protection of Laboratory workers from occupationally Acquired Infections; Approved guideline-Third Edition CLSI document M29-A3 Wayne, PA 2005.