

1F-584-C100

## Monoclonal Antibody to CD79b (mouse) Fluorescein (FITC) conjugated (0.1 mg)

<b>Clone:</b>	HM79
<b>Isotype:</b>	Hamster IgG2
<b>Specificity:</b>	The Armenian hamster monoclonal antibody HM79 recognizes an extracellular epitope of mouse CD79b (CD79 beta, Ig beta), a component of B cell receptor (BCR) complex.
<b>Regulatory Status:</b>	RUO
<b>Immunogen:</b>	Purified CD79a/b (alpha/beta) dimers from WEHI231 cells
<b>Species Reactivity:</b>	Mouse
<b>Negative Species:</b>	Human
<b>Preparation:</b>	The purified antibody is conjugated with Fluorescein isothiocyanate (FITC) under optimum conditions. The reagent is free of unconjugated FITC.
<b>Concentration:</b>	0.5 mg/ml
<b>Storage Buffer:</b>	Phosphate buffered saline (PBS) with 15 mM sodium azide, approx. pH 7.4
<b>Storage / Stability:</b>	Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light. Do not use after expiration date stamped on vial label.
<b>Usage:</b>	The reagent is designed for Flow Cytometry analysis. Suggested working dilution is 1 microgram/ml. Indicated dilution is recommended starting point for use of this product. Working concentrations should be determined by the investigator.
<b>Expiration:</b>	See vial label
<b>Lot Number:</b>	See vial label
<b>Background:</b>	CD79b (Ig beta, B29) forms disulfide-linked heterodimer with CD79a (Ig alpha, MB1). They both are transmembrane proteins with extended cytoplasmic domains containing immunoreceptor tyrosine activation motives (ITAMs), and together with cell surface immunoglobulin they constitute B-cell antigen-specific receptor (BCR). CD79a and b are the first components of BCR that are expressed developmentally. They appear on pro-B cells in association with the endoplasmic reticulum chaperone calnexin. Subsequently, in pre-B cells, CD79 heterodimer is associated with lambda5-VpreB surrogate immunoglobulin and later with antigen-specific surface immunoglobulins. CD79a/b complex interacts with Src-family tyrosine kinase Lyn, which phosphorylates its cytoplasmic ITAM motives to form docking sites for downstream signaling.

**For laboratory research only, not for drug, diagnostic or other use.**

**Antibodies****References:**

- \*Gong S, Nussenzweig MC: Regulation of an early developmental checkpoint in the B cell pathway by Ig beta. *Science*. 1996 Apr 19;272(5260):411-4.
- \*Teh YM, Neuberger MS: The immunoglobulin (Ig)alpha and Igbeta cytoplasmic domains are independently sufficient to signal B cell maturation and activation in transgenic mice. *J Exp Med*. 1997 May 19;185(10):1753-8.
- \*Nagata K, Nakamura T, Kitamura F, Kuramochi S, Taki S, Campbell KS, Karasuyama H: The Ig alpha/Igbeta heterodimer on mu-negative proB cells is competent for transducing signals to induce early B cell differentiation. *Immunity*. 1997 Oct;7(4):559-70.
- \*Kouro T, Nagata K, Takaki S, Nisitani S, Hirano M, Wahl MI, Witte ON, Karasuyama H, Takatsu K: Bruton's tyrosine kinase is required for signaling the CD79b-mediated pro-B to pre-B cell transition. *Int Immunol*. 2001 Apr;13(4):485-93.
- \*Fuentes-Pananá EM, Bannish G, Shah N, Monroe J.G.: Basal Igalpha/Igbeta signals trigger the coordinated initiation of pre-B cell antigen receptor-dependent processes. *J Immunol*. 2004 Jul 15;173(2):1000-11.
- \*Fuentes-Pananá EM, Bannish G, van der Voort D, King LB, Monroe J.G.: Ig alpha/Ig beta complexes generate signals for B cell development independent of selective plasma membrane compartmentalization. *J Immunol*. 2005 Feb 1;174(3):1245-52.
- \*Koyama M, Ishihara K, Karasuyama H, Cordell JL, Iwamoto A, Nakamura T: CD79 alpha/CD79 beta heterodimers are expressed on pro-B cell surfaces without associated mu heavy chain. *Int Immunol*. 1997 Nov;9(11):1767-72.
- \*Maki K, Nagata K, Kitamura F, Takemori T, Karasuyama H: Immunoglobulin beta signaling regulates locus accessibility for ordered immunoglobulin gene rearrangements. *J Exp Med*. 2000 Apr 17;191(8):1333-40.
- \*Li Y, Chen F, Putt M, Koo YK, Madaio M, Cambier JC, Cohen PL, Eisenberg RA: B cell depletion with anti-CD79 mAbs ameliorates autoimmune disease in MRL/lpr mice. *J Immunol*. 2008 Sep 1;181(5):2961-72.
- \*Aiba Y, Kameyama M, Yamazaki T, Tedder TF, Kurosaki T: Regulation of B-cell development by BCAP and CD19 through their binding to phosphoinositide 3-kinase. *Blood*. 2008 Feb 1;111(3):1497-503.
- \*Kouro T, Nagata K, Takaki S, Nisitani S, Hirano M, Wahl MI, Witte ON, Karasuyama H, Takatsu K: Bruton's tyrosine kinase is required for signaling the CD79b-mediated pro-B to pre-B cell transition. *Int Immunol*. 2001 Apr;13(4):485-93.

Unless indicated otherwise, all products are For Research Use Only and not for diagnostic or therapeutic use. Not for resale or transfer either as a stand-alone product or as a component of another product without written consent of EXBIO. EXBIO will not be held responsible for patent infringement or other violations that may occur with the use of our products. All orders are accepted subject to EXBIO's term and conditions which are available at [www.exbio.cz](http://www.exbio.cz).

**For laboratory research only, not for drug, diagnostic or other use.**

EXBIO Praha | Nad Safinou II 341 | 252 50 Vestec u Prahy | Czech Republic  
Tel: +420 261 090 666 | Fax: +420 261 090 660 | [orders@exbio.cz](mailto:orders@exbio.cz) | [www.exbio.cz](http://www.exbio.cz)