



1Y-530-T100

Monoclonal Antibody to CD79a PE-Dyomics 647 (PE-DY647) conjugated (100 tests)

Clone:	HM57
Isotype:	Mouse IgG1
Specificity:	<p>The antibody HM57 interacts with CD79a (Ig alpha), a 40-45 kDa subunit of B cell antigen-specific receptor (BCR) and its early developmental forms.</p> <p>HLDA V; WS Code BC cB018 HLDA VI; WS Code BP 193 HLDA VI; WS Code BP 89 HLDA VI; WS Code B B103 HLDA VI; WS Code B CD79.4</p>
Immunogen:	Synthetic peptide corresponding to amino acids 202-216 of human CD79a
Species Reactivity:	Human, Porcine, Mouse, Rat, Bovine, Equine (Horse), Rabbit, Guinea pig, Opossum, Chicken, Other not determined
Preparation:	The purified antibody is conjugated with tandem dye PE-Dyomics 647 (PE-DY647) under optimum conditions. The conjugate is purified by size-exclusion chromatography and adjusted for direct use. No reconstitution is necessary.
Storage Buffer:	The reagent is provided in phosphate buffered saline (PBS) containing 15 mM sodium azide and 0.2% (w/v) high-grade protease free Bovine Serum Albumin (BSA) as a stabilizing agent.
Storage / Stability:	<p>Store in the dark at 2-8°C. Do not freeze. Avoid prolonged exposure to light.</p> <p>Do not use after expiration date stamped on vial label.</p> <p>Short-term exposure to room temperature should not affect the quality of the reagent. However, if reagent is stored under any conditions other than those specified, the conditions must be verified by the user.</p>
Usage:	<p>The reagent is designed for Flow Cytometry analysis of human blood cells using 20 µl reagent / 100 µl of whole blood or 10⁶ cells in a suspension.</p> <p>The content of a vial (2 ml) is sufficient for 100 tests.</p>
Expiration:	See vial label
Lot Number:	See vial label
Background:	<p>CD79a (Ig alpha, MB1) forms disulfide-linked heterodimer with CD79b (Ig beta). 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. At the plasma cell stage, CD79a is present as an intracellular component. CD79a/b complex interacts with Src-family tyrosine kinase Lyn, which phosphorylates its cytoplasmic ITAM motives to form docking sites for downstream signaling.</p>

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

**Antibodies****References:**

- *Bannish G, Fuentes-Pananá EM, Cambier JC, Pear WS, Monroe J.G.: Ligand-independent signaling functions for the B lymphocyte antigen receptor and their role in positive selection during B lymphopoiesis. *J Exp Med.* 2001 Dec 3;194(11):1583-96.
- *Pike KA, Iacampo S, Friedmann JE, Ratcliffe M.J.: The cytoplasmic domain of Ig alpha is necessary and sufficient to support efficient early B cell development. *J Immunol.* 2004 Feb 15;172(4):2210-8.
- *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.
- *Fuentes-Pananá EM, Bannish G, Karnell FG, Trembl JF, Monroe J.G.: Analysis of the individual contributions of Igalpha (CD79a)- and Igbeta (CD79b)-mediated tonic signaling for bone marrow B cell development and peripheral B cell maturation. *J Immunol.* 2006 Dec 1;177(11):7913-22.
- *van Noesel CJ, van Lier RA, Cordell JL, Tse AG, van Schijndel GM, de Vries EF, Mason DY, Borst J.: The membrane IgM-associated heterodimer on human B cells is a newly defined B cell antigen that contains the protein product of the mb-1 gene. *J Immunol.* 1991 Jun 1;146(11):3881-8.
- *Mason DY, Cordell JL, Tse AG, van Dongen JJ, van Noesel CJ, Micklem K, Pulford KA, Valensi F, Comans-Bitter WM, Borst J, et al.: The IgM-associated protein mb-1 as a marker of normal and neoplastic B cells. *J Immunol.* 1991 Dec 1;147(11):2474-82.
- *Mason DY, van Noesel CJ, Cordell JL, Comans-Bitter WM, Micklem K, Tse AG, van Lier RA, van Dongen J.J.: The B29 and mb-1 polypeptides are differentially expressed during human B cell differentiation. *Eur J Immunol.* 1992 Oct;22(10):2753-6.
- *Jones M, Cordell JL, Beyers AD, Tse AG, Mason D.Y.: Detection of T and B cells in many animal species using cross-reactive anti-peptide antibodies. *J Immunol.* 1993 Jun 15;150(12):5429-35.
- *Mason DY, Cordell JL, Brown MH, Borst J, Jones M, Pulford K, Jaffe E, Ralfkiaer E, Dallenbach F, Stein H, et al: CD79a: a novel marker for B-cell neoplasms in routinely processed tissue samples. *Blood.* 1995 Aug 15;86(4):1453-9.
- *Leukocyte Typing V., Schlossman S. et al. (Eds.), Oxford University Press (1995).
- *Leukocyte Typing VI., Kishimoto T. et al. (Eds.), Garland Publishing Inc. (1997).
- *Faldyna M, Samankova P, Leva L, Cerny J, Oujezdska J, Rehakova Z, Sinkora J: Cross-reactive anti-human monoclonal antibodies as a tool for B-cell identification in dogs and pigs. *Vet Immunol Immunopathol.* 2007 Sep 15;119(1-2):56-62.

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