

1P-530-T025

Monoclonal Antibody to CD79a Phycoerythrin (PE) conjugated (25 tests)

Clone: HM57

Isotype: Mouse IgG1

Specificity: 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.

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

Regulatory Status: RUO

Immunogen: Synthetic peptide corresponding to amino acids 202-216 of human CD79a

Species Reactivity: Human, Porcine, Mouse, Rat, Bovine, Equine (Horse), Guinea pig, Opossum,

Rabbit, Chicken, Other not determined

Preparation: The purified antibody is conjugated with R-Phycoerythrin (PE) 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 stabilizing phosphate buffered saline (PBS) solution

containing 15mM sodium azide.

Storage / Stability: 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.

Usage: The reagent is designed for Flow Cytometry analysis of human blood cells using

10 μl reagent / 100 μl of whole blood or 10⁶ cells in a suspension.

The content of a vial (0.25 ml) is sufficient for 25 tests.

Expiration: See vial label

Lot Number: See vial label

Background: 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.



PRODUCT DATA SHEET

References:

*Bannish G, Fuentes-Pananá EM, Cambier JC, Pear WS, Monroe JG: 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, lacampo S, Friedmann JE, Ratcliffe MJ: 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 JG: 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 JG: 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, Treml JF, Monroe JG: 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 lgM-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 JJ: 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 DY: 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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