

# CD79A (HM47): sc-20064

## BACKGROUND

CD79 (also designated Ig  $\alpha$ /Ig  $\beta$ ) is a heterodimer composed of  $\alpha$  chains, designated CD79A or MB-1, and  $\beta$  chains, designated CD79B or B29. The B cell antigen receptor complex (BCR) is formed by the association of CD79 with a membrane immunoglobulin, such as IgM or IgD. The membrane immunoglobulins IgM and IgD achieve surface expression and antigen presentation function in response to CD79 association. The cytoplasmic tails of both CD79A and CD79B contain an ITAM (immuno-receptor tyrosine-based activation) motif, which acts to initiate the BCR signaling reactions by binding to and activating tyrosine kinases.

## CHROMOSOMAL LOCATION

Genetic locus: CD79A (human) mapping to 19q13.2; Cd79a (mouse) mapping to 7 A3.

## SOURCE

CD79A (HM47) is a mouse monoclonal antibody raised against a synthetic CD79A peptide of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

CD79A (HM47) is available conjugated to agarose (sc-20064 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-20064 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-20064 PE), fluorescein (sc-20064 FITC), Alexa Fluor<sup>®</sup> 488 (sc-20064 AF488), Alexa Fluor<sup>®</sup> 546 (sc-20064 AF546), Alexa Fluor<sup>®</sup> 594 (sc-20064 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-20064 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-20064 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-20064 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

CD79A (HM47) is recommended for detection of CD79A of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1  $\mu$ g per 1 x 10<sup>6</sup> cells).

Suitable for use as control antibody for CD79A siRNA (h): sc-35025, CD79A siRNA (m): sc-35026, CD79A shRNA Plasmid (h): sc-35025-SH, CD79A shRNA Plasmid (m): sc-35026-SH, CD79A shRNA (h) Lentiviral Particles: sc-35025-V and CD79A shRNA (m) Lentiviral Particles: sc-35026-V.

Molecular Weight of CD79A: 44 kDa.

Positive Controls: CD79A (h): 293T Lysate: sc-373119, Daudi cell lysate: sc-2415 or Ramos cell lysate: sc-2216.

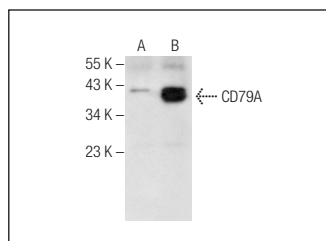
## STORAGE

Store at 4° C, **\*\*DO NOT FREEZE\*\***. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

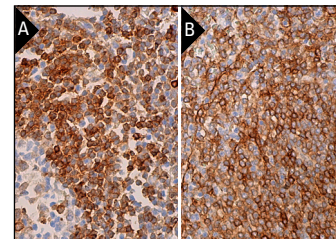
## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## DATA



CD79A (HM47): sc-20064. Western blot analysis of CD79A expression in non-transfected: sc-117752 (A) and human CD79A transfected: sc-373119 (B) 293T whole cell lysates.



CD79A (HM47): sc-20064. Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing membrane and cytoplasmic staining of cells in non-germinal center (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human spleen tissue showing membrane and cytoplasmic staining of cells in white pulp and cells in red pulp (B).

## SELECT PRODUCT CITATIONS

- Pillet, S., et al. 2009. Canine distemper virus selectively inhibits apoptosis progression in infected immune cells. *J. Virol.* 83: 6279-6287.
- Huang, X., et al. 2011. Downregulation of the B-cell receptor signaling component CD79b in plasma cell myeloma: a possible post transcriptional regulation. *Pathol. Int.* 61: 122-129.
- Engel, R.M., et al. 2014. Evaluation of pigtail macaques as a model for the effects of copper intrauterine devices on HIV infection. *J. Med. Primatol.* 43: 349-359.
- Li, W., et al. 2015. Core fucosylation of IgG B cell receptor is required for antigen recognition and antibody production. *J. Immunol.* 194: 2596-2606.
- Muehlenbachs, A., et al. 2016. Cardiac tropism of *Borrelia burgdorferi*: an autopsy study of sudden cardiac death associated with Lyme carditis. *Am. J. Pathol.* 186: 1195-1205.
- Xue, K., et al. 2016. PAX5 promotes pre-B cell proliferation by regulating the expression of pre-B cell receptor and its downstream signaling. *Mol. Immunol.* 73: 1-9.
- Weis, V., et al. 2017. Unperturbed immune function despite mutation of C-terminal tyrosines in Syk previously implicated in signaling and activity regulation. *Mol. Cell. Biol.* 37: e00216-e00217.
- Choi, J., et al. 2020. Regulation of B cell receptor-dependent NF $\kappa$ B signaling by the tumor suppressor KLHL14. *Proc. Natl. Acad. Sci. USA.* 117: 6092-6102.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

Alexa Fluor<sup>®</sup> is a trademark of Molecular Probes, Inc., Oregon, USA