

Datasheet: MCA80PET

Description:	MOUSE ANTI HUMAN CD1a:RPE
Specificity:	CD1a
Format:	RPE
Product Type:	Monoclonal Antibody
Clone:	NA1/34-HLK
Isotype:	IgG2a
Quantity:	25 TESTS

Product Details

Applications

This product has been reported to work in the following applications. This information is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information. For general protocol recommendations, please visit www.bio-rad-antibodies.com/protocols.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			Neat

Where this antibody has not been tested for use in a particular technique this does not necessarily exclude its use in such procedures. Suggested working dilutions are given as a guide only. It is recommended that the user titrates the antibody for use in their own system using appropriate negative/positive controls.

Target Species

Human

Species Cross Reactivity

Reacts with: Dog, Cynomolgus monkey

N.B. Antibody reactivity and working conditions may vary between species. Cross reactivity is derived from testing within our laboratories, peer-reviewed publications or personal communications from the originators. Please refer to references indicated for further information.

Product Form

Purified IgG conjugated to R. Phycoerythrin (RPE) - lyophilized

Reconstitution

Reconstitute in 0.25 ml distilled water

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
RPE 488nm laser	496	578

Preparation

Purified IgG prepared by affinity chromatography on Protein A

Buffer Solution

Phosphate buffered saline

Preservative	0.09% Sodium Azide
Stabilisers	1.0% Bovine Serum Albumin 5% Sucrose
Immunogen	Human thymocytes
External Database Links	<p>UniProt: P06126 Related reagents</p> <p>Entrez Gene: 909 CD1A Related reagents</p>
RRID	AB_1101140
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the NS1/1 Ag4.1 mouse myeloma cell line
Specificity	Mouse anti Human CD1a antibody, clone NA1/34-HLK recognizes the human CD1a cell surface glycoprotein, a ~49 kDa single pass type 1 transmembrane glycoprotein containing a single Ig-like domain, expressed in association with beta 2 microglobulin. CD1a is expressed strongly by cortical thymocytes, and also by Langerhans cells and interdigitating cells. CD1a is involved in the presentation of lipids and glycolipids to NK cells (Sloma <i>et al.</i> 2008).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> McMichael, A.J. <i>et al.</i> (1979) A human thymocyte antigen defined by a hybrid myeloma monoclonal antibody. Eur J Immunol. 9 (3): 205-10. Poulter, L.W. <i>et al.</i> (1986) Discrimination of human macrophages and dendritic cells by means of monoclonal antibodies. Scand J Immunol. 24 (3): 351-7. Galkowska, H. <i>et al.</i> (1996) Reactivity of antibodies directed against human antigens with surface markers on canine leukocytes. Vet Immunol Immunopathol. 53 (3-4): 329-34. Yoshino, N. <i>et al.</i> (2000) Upgrading of flow cytometric analysis for absolute counts, cytokines and other antigenic molecules of cynomolgus monkeys (<i>Macaca fascicularis</i>) by using anti-human cross-reactive antibodies. Exp Anim. 49 (2): 97-110. Hirbod, T. <i>et al.</i> (2010) Abundant expression of HIV target cells and C-type lectin receptors in the foreskin tissue of young Kenyan men. Am J Pathol. 176: 2798-805. Liu, C.C. <i>et al.</i> (2008) Transient downregulation of monocyte-derived dendritic-cell differentiation, function, and survival during tumoral progression and regression in an <i>in vivo</i> canine model of transmissible venereal tumor. Cancer Immunol Immunother. 57: 479-91. Sugiura K <i>et al.</i> (2010) Effect of IL-12 on canine dendritic cell maturation following differentiation induced by granulocyte-macrophage CSF and IL-4. Vet Immunol Immunopathol. 137 (3-4): 322-6. Angel, C.E. <i>et al.</i> (2006) Distinctive localization of antigen-presenting cells in human lymph nodes. Blood. 113: 1257-67. Bosco, M.C. <i>et al.</i> (2011) Hypoxia modulates the gene expression profile of

- immunoregulatory receptors in human mature dendritic cells: identification of TREM-1 as a novel hypoxic marker in vitro and *in vivo*. [Blood. 117: 2625-39.](#)
10. Buettner, M. *et al.* (2005) Inverse correlation of maturity and antibacterial activity in human dendritic cells. [J Immunol. 174: 4203-9.](#)
 11. Cox, K. *et al.* (2005) Plasmacytoid dendritic cells (PDC) are the major DC subset innately producing cytokines in human lymph nodes. [J Leukoc Biol. 78: 1142-52.](#)
 12. Mito, K. *et al.* (2010) IFN $\{\gamma\}$ markedly cooperates with intratumoral dendritic cell vaccine in dog tumor models. [Cancer Res. 70: 7093-101.](#)
 13. Murray, S. *et al.* (2000) Diagnostic and therapeutic evaluation of an anti-Langerhans cell histiocytosis monoclonal antibody (NA1/34) in a new xenograft model. [J Invest Dermatol. 114: 127-34.](#)
 14. Scheinecker, C. *et al.* (1998) Initiation of the autologous mixed lymphocyte reaction requires the expression of costimulatory molecules B7-1 and B7-2 on human peripheral blood dendritic cells. [J Immunol. 161: 3966-73.](#)
 15. Wang, Y.S. *et al.* (2007) Characterization of canine monocyte-derived dendritic cells with phenotypic and functional differentiation. [Can J Vet Res. 71: 165-74.](#)
 16. Elia, A.R. *et al.* (2008) Human dendritic cells differentiated in hypoxia down-modulate antigen uptake and change their chemokine expression profile. [J Leukoc Biol. 84: 1472-82.](#)
 17. Fanales-Belasio, E. *et al.* (2009) HIV-1 Tat addresses dendritic cells to induce a predominant Th1-type adaptive immune response that appears prevalent in the asymptomatic stage of infection. [J Immunol. 182: 2888-97.](#)
 18. Kaldensjö, T. *et al.* (2011) Detection of intraepithelial and stromal Langerin and CCR5 positive cells in the human endometrium: potential targets for HIV infection. [PLoS One. 6: e21344.](#)
 19. Angel, C.E. *et al.* (2007) CD14⁺ antigen-presenting cells in human dermis are less mature than their CD1a⁺ counterparts. [Int Immunol. 19: 1271-9.](#)
 20. Angel, C.E. *et al.* (2007) Comprehensive analysis of MHC-II expression in healthy human skin. [Immunol Cell Biol. 85: 363-9.](#)
 21. Baharom F. *et al.* (2016) Dendritic Cells and Monocytes with Distinct Inflammatory Responses Reside in Lung Mucosa of Healthy Humans [The Journal of Immunology. May 2 \[Epub ahead of print\]](#)
 22. Bonnefont-Rebeix, C. *et al.* (2016) Characterization of a novel canine T-cell line established from a spontaneously occurring aggressive T-cell lymphoma with large granular cell morphology. [Immunobiology. 221 \(1\): 12-22.](#)
 23. Zegarska, B. *et al.* (2017) Changes of Langerhans cells during skin ageing. [Postepy Dermatol Alergol. 34 \(3\): 260-7.](#)
 24. Tomić, S. *et al.* (2018) Functionalization-dependent effects of cellulose nanofibrils on tolerogenic mechanisms of human dendritic cells. [Int J Nanomedicine. 13: 6941-60.](#)

Storage

Prior to reconstitution store at +4°C. Following reconstitution store at +4°C.

DO NOT FREEZE.

This product should be stored undiluted. This product is photosensitive and should be protected from light. Should this product contain a precipitate we recommend microcentrifugation before use.

Guarantee 12 months from date of despatch

Health And Safety Information Material Safety Datasheet documentation #20487 available at:
20487: <https://www.bio-rad-antibodies.com/uploads/MSDS/20487.pdf>

Regulatory For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:RPE \(MCA929PE\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)

[HUMAN SEROBLOCK \(BUF070B\)](#)

North & South Tel: +1 800 265 7376

America Fax: +1 919 878 3751

Email: antibody_sales_us@bio-rad.com

Worldwide

Tel: +44 (0)1865 852 700

Fax: +44 (0)1865 852 739

Email: antibody_sales_uk@bio-rad.com

Europe

Tel: +49 (0) 89 8090 95 21

Fax: +49 (0) 89 8090 95 50

Email: antibody_sales_de@bio-rad.com

From March 15, 2021, we will no longer supply printed datasheets with our products.
Look out for updates on how to access your digital version at bio-rad-antibodies.com

'M375672:210104'

Printed on 02 Mar 2021

© 2021 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)