Datasheet: MCA80PB

BATCH NUMBER 171854

Description:	MOUSE ANTI HUMAN CD1a:Pacific Blue®
Specificity:	CD1a
Format:	Pacific Blue®
Product Type:	Monoclonal Antibody
Clone:	NA1/34-HLK
Isotype:	IgG2a
Quantity:	100 TESTS/1ml

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 product 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 product 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 Pacific Blue - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
Pacific Blue®	410	455

Preparation

Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	0.09% Sodium Azide (NaN_3) 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	Human thymocytes
External Database Links	**UniProt:** P06126 Related reagents **Entrez Gene:** 909 CD1A Related reagents
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 *et al.* 2008).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10^6 cells in 100ul
References	1. Poulter, L.W. *et al.* (1986) Discrimination of human macrophages and dendritic cells by means of monoclonal antibodies. Scand J Immunol. 24 (3): 351-7. 2. 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. 3. 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. 4. Buettner, M. *et al.* (2005) Inverse correlation of maturity and antibacterial activity in human dendritic cells. J Immunol. 174: 4203-9. 5. 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. 6. Angel, C.E. *et al.* (2006) Distinctive localization of antigen-presenting cells in human lymph nodes. Blood. 113: 1257-67. 7. 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. 8. Angel, C.E. *et al.* (2007) Comprehensive analysis of MHC-II expression in healthy human skin. Immunol Cell Biol. 85: 363-9. 9. 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. 10. 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.
11. Liu, C.C. *et al* (2008) Transient downregulation of monocyte-derived dendritic-cell differentiation, function, and survival during tumoral progression and regression in an *in vivo* canine model of transmissible venereal tumor. Cancer Immunol Immunother. 57: 479-91.
12. 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.
13. Sugiura K *et al.* (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.
14. Mito, K. *et al.* (2010) IFN{gamma} markedly cooperates with intratumoral dendritic cell vaccine in dog tumor models. Cancer Res. 70: 7093-101.
15. Hirbod, T. *et al.* (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.
16. 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.
17. Bosco, M.C. *et al.* (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.
18. Baharom, F. *et al.* (2016) Dendritic Cells and Monocytes with Distinct Inflammatory Responses Reside in Lung Mucosa of Healthy Humans. J Immunol. 196 (11): 4498-509.
19. 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.
20. Zegarska, B. *et al.* (2017) Changes of Langerhans cells during skin ageing. Postepy Dermatol Alergol. 34 (3): 260-7.
21. Tomić, S. *et al.* (2018) Functionalization-dependent effects of cellulose nanofibrils on tolerogenic mechanisms of human dendritic cells. Int J Nanomedicine. 13: 6941-60.
22. Guilliams, M. *et al.* (2016) Unsupervised High-Dimensional Analysis Aligns Dendritic Cells across Tissues and Species. Immunity. 45 (3): 669-84.

Storage

This product is shipped at ambient temperature. It is recommended to aliquot and store at -20°C on receipt. When thawed, aliquot the sample as needed. Keep aliquots at 2-8°C for short term use (up to 4 weeks) and store the remaining aliquots at -20°C.

Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended. This product is photosensitive and should be protected from light.

Guarantee

12 months from date of despatch

Acknowledgements

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Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA80PB
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:Pacific Blue® (MCA929PB)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M445896:251001'

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