

## Datasheet: MCA87PB

|                      |                                     |
|----------------------|-------------------------------------|
| <b>Description:</b>  | MOUSE ANTI HUMAN CD45:Pacific Blue® |
| <b>Specificity:</b>  | CD45                                |
| <b>Other names:</b>  | LCA                                 |
| <b>Format:</b>       | Pacific Blue®                       |
| <b>Product Type:</b> | Monoclonal Antibody                 |
| <b>Clone:</b>        | F10-89-4                            |
| <b>Isotype:</b>      | IgG2a                               |
| <b>Quantity:</b>     | 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](http://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.

|                                       |                                                                                                        |                            |                          |
|---------------------------------------|--------------------------------------------------------------------------------------------------------|----------------------------|--------------------------|
| <b>Target Species</b>                 | Human                                                                                                  |                            |                          |
| <b>Species Cross Reactivity</b>       | Reacts with: Horse<br><b>N.B.</b> Antibody reactivity and working conditions may vary between species. |                            |                          |
| <b>Product Form</b>                   | Purified IgG conjugated to Pacific Blue® - liquid                                                      |                            |                          |
| <b>Max Ex/Em</b>                      | <b>Fluorophore</b>                                                                                     | <b>Excitation Max (nm)</b> | <b>Emission Max (nm)</b> |
|                                       | Pacific Blue®                                                                                          | 410                        | 455                      |
| <b>Preparation</b>                    | Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant          |                            |                          |
| <b>Buffer Solution</b>                | Phosphate buffered saline                                                                              |                            |                          |
| <b>Preservative Stabilisers</b>       | 0.09% Sodium Azide                                                                                     |                            |                          |
|                                       | 1% Bovine Serum Albumin                                                                                |                            |                          |
| <b>Approx. Protein Concentrations</b> | IgG concentration 0.05 mg/ml                                                                           |                            |                          |
| <b>Immunogen</b>                      | Human T lymphocytes.                                                                                   |                            |                          |

**External Database  
Links**

**UniProt:**

[P08575](#)

[Related reagents](#)

**Entrez Gene:**

[5788](#)

PTPRC

[Related reagents](#)

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**Synonyms**

CD45

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**Fusion Partners**

Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.

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**Specificity**

**Mouse anti Human CD45 antibody, clone F10-89-4** recognizes the human CD45 cell surface antigen, also known as the leucocyte common antigen (LCA). CD45 is a complex molecule existing in a number of isoforms.

Antibodies recognising a common epitope on all of these isoforms are termed CD45 whilst those recognising only individual isoforms are termed CD45RA or CD45RO etc.

Mouse anti Human CD45 antibody, clone F10-89-4 reacts with all forms of CD45 expressed by all haematopoietic cells, except erythrocytes, having a higher level of expression on lymphocytes than on granulocytes.

Mouse anti Human CD45 antibody, clone F10-89-4 is routinely tested in flow cytometry on human peripheral blood leucocytes

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**Flow Cytometry**

Use 10ul of the suggested working dilution to label  $10^6$  cells or 100ul whole blood.

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**References**

1. Dalchau, R. *et al.* (1980) Monoclonal antibody to a human leukocyte-specific membrane glycoprotein probably homologous to the leukocyte-common (L-C) antigen of the rat. [Eur J Immunol. 10 \(10\): 737-44.](#)
2. Quenby, S *et al.* (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. [Human Reprod. 14\(9\):2386-2391.](#)
3. Hauser, P.V. *et al.* (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. [Am J Pathol. 177: 2011-21.](#)
4. Mallam, E. *et al.* (2010) Characterization of *in vitro* expanded bone marrow-derived mesenchymal stem cells from patients with multiple sclerosis. [Mult Scler. 16: 909-18.](#)
5. Marrinucci, D. *et al.* (2010) Cytomorphology of circulating colorectal tumor cells:a small case series. [J Oncol. 2010: 861341.](#)
6. Kazane, S.A. *et al.* (2012) Site-specific DNA-antibody conjugates for specific and sensitive immuno-PCR. [Proc Natl Acad Sci U S A. 109: 3731-6.](#)
7. Paul, G. *et al.* (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. [PLoS One. 7: e35577.](#)
8. Sadarangani, A. *et al.* (2015) GLI2 inhibition abrogates human leukemia stem cell dormancy. [J Transl Med. 13: 98.](#)
9. Gunawardene, P. *et al.* (2015) Association Between Circulating Osteogenic Progenitor Cells and Disability and Frailty in Older Persons: The Nepean Osteoporosis and Frailty Study. [J Gerontol A Biol Sci Med Sci. pii: glv190.](#)
10. Gogoi P *et al.* (2016) Development of an Automated and Sensitive Microfluidic Device for Capturing and Characterizing Circulating Tumor Cells (CTCs) from Clinical Blood Samples. [PLoS One. 11 \(1\): e0147400.](#)
11. Spaas, J.H. *et al.* (2013) Culture and characterisation of equine peripheral blood mesenchymal stromal cells. [Vet J. 195 \(1\): 107-13.](#)

12. Gomiero, C. *et al.* (2016) Tenogenic induction of equine mesenchymal stem cells by means of growth factors and low-level laser technology. [Vet Res Commun. 40 \(1\): 39-48.](#)
13. De Schauwer, C. *et al.* (2012) In search for cross-reactivity to immunophenotype equine mesenchymal stromal cells by multicolor flow cytometry. [Cytometry A. 81 \(4\): 312-23.](#)
14. Bianchessi, M. *et al.* (2016) Effect of Fibroblast Growth Factor 2 on Equine Synovial Fluid Chondroprogenitor Expansion and Chondrogenesis. [Stem Cells Int. 2016: 9364974.](#)
15. Mohamed Suhaimi, N.A. *et al.* (2015) Non-invasive sensitive detection of KRAS and BRAF mutation in circulating tumor cells of colorectal cancer patients. [Mol Oncol. 9 \(4\): 850-60.](#)
16. Ruiz, C. *et al.* (2015) Limited genomic heterogeneity of circulating melanoma cells in advanced stage patients. [Phys Biol. 12 \(1\): 016008.](#)
17. Branly, T. *et al.* (2017) Characterization and use of Equine Bone Marrow Mesenchymal Stem Cells in Equine Cartilage Engineering. Study of their Hyaline Cartilage Forming Potential when Cultured under Hypoxia within a Biomaterial in the Presence of BMP-2 and TGF- $\beta$ 1. [Stem Cell Rev. Jun 09 \[Epub ahead of print\].](#)
18. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)

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**Storage**

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. This product is photosensitive and should be protected from light.

Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

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**Shelf Life**

18 months from date of despatch.

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**Acknowledgements**

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**Health And Safety Information**

Material Safety Datasheet documentation #10041 available at: 10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

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**Regulatory**

For research purposes only

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## Related Products

### Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Pacific Blue® \(MCA929PB\)](#)

### Recommended Useful Reagents

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

## HUMAN SEROBLOCK (BUF070B)

**North & South** Tel: +1 800 265 7376

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