# Datasheet: MCA87A647 BATCH NUMBER 165618

| Description:  | MOUSE ANTI HUMAN CD45:Alexa Fluor® 647 |
|---------------|--|
| Specificity:  | CD45                                   |
| Other names:  | LCA                                    |
| Format:       | ALEXA FLUOR® 647                       |
| Product Type: | Monoclonal Antibody                    |
| Clone:        | F10-89-4                               |
| Isotype:      | lgG2a                                  |
| 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 <u>www.bio-rad-antibodies.com/protocols</u> . |                               |                            |  |                           |  |
|-----------------------------|--|-------------------------------|----------------------------|--|---------------------------|--|
|                             |  | Yes                           | No                         | Not Determined                             | Suggested Dilution        |  |
|                             | Flow Cytometry   | •                             |                            |  | Neat - 1/2                |  |
|                             | Where this antibody has<br>necessarily exclude its<br>a guide only. It is recom<br>system using appropriat   | use in such p<br>imended that | procedures<br>t the user t | s. Suggested worki<br>titrates the antibod | ng dilutions are given as |  |
| Target Species              | Human  |                               |                            |  |                           |  |
| Product Form                | Purified IgG conjugated to Alexa Fluor® 647 - liquid   |                               |                            |  |                           |  |
| Max Ex/Em                   | Fluorophore  | Excitation Ma                 | ix (nm) E                  | mission Max (nm)                           |                           |  |
|                             | Alexa Fluor®647  | 650                           |                            | 665  | -                         |  |
| Preparation                 | Purified IgG prepared by affinity chromatography on Protein A from tissue culture supernatant  |                               |                            |  |                           |  |
| Buffer Solution             | Phosphate buffered saline  |                               |                            |  |                           |  |
| Preservative<br>Stabilisers | 0.09% Sodium Azide<br>1% Bovine Serum A  | lbumin                        |                            |  |                           |  |
| Approx. Protein             | IgG concentration 0.05   | mg/ml                         |                            |  |                           |  |

### Concentrations

| Immunogen                  | Human T lymphocytes.   |
|----------------------------|--|
| External Database<br>Links | UniProt:<br><u>P08575</u> <u>Related reagents</u>  |
|                            | Entrez Gene:<br>5788 PTPRC Related reagents  |
| Synonyms                   | CD45   |
| RRID                       | AB_324730  |
| Fusion Partners            | Spleen cells from immunized BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.   |
| Specificity                | <b>Mouse anti Human CD45 antibody, clone F10-89-4</b> recognizes the human CD45 cell surface antigen, also known as leucocyte common antigen (LCA). CD45 is a complex molecule existing in a number of isoforms.   |
|                            | Antibodies recognizing a common epitope on all of these isoforms are termed CD45 whilst those recognizing 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. It is routinely tested in flow cytometry on human peripheral blood leucocytes.   |
|                            | Mouse anti Human CD45 antibody, clone F10-89-4, has been validated for use on the <u>Genesis Cell Isolation System with the CelSelect Slide<sup>TM</sup> technology</u> .  |
| Flow Cytometry             | Use 10ul of the suggested working dilution to label 10 <sup>6</sup> cells or 100ul whole blood.  |
| References                 | <ol> <li>Quenby, S <i>et al.</i> (1999) Pre-implantation endometrial leukocytes in women with<br/>recurrent miscarriage. <u>Human Reprod. 14(9):2386-2391.</u></li> <li>Hauser, P.V. <i>et al.</i> (2010) Stem cells derived from human amniotic fluid contribute to<br/>acute kidney injury recovery. <u>Am J Pathol. 177: 2011-21.</u></li> <li>Mallam, E. <i>et al.</i> (2010) Characterization of <i>in vitro</i> expanded bone marrow-derived<br/>mesenchymal stem cells from patients with multiple sclerosis. <u>Mult Scler. 16: 909-18.</u></li> <li>Marrinucci, D. <i>et al.</i> (2010) Cytomorphology of circulating colorectal tumor cells:a small<br/>case series. <u>J Oncol. 2010: 861341.</u></li> <li>Paul, G. <i>et al.</i> (2012) The adult human brain harbors multipotent perivascular<br/>mesenchymal stem cells. <u>PLoS One. 7: e35577.</u></li> <li>De Schauwer, C. <i>et al.</i> (2012) In search for cross-reactivity to immunophenotype equine<br/>mesenchymal stromal cells by multicolor flow cytometry. <u>Cytometry A. 81 (4): 312-23.</u></li> <li>Kazane, S.A. <i>et al.</i> (2012) Site-specific DNA-antibody conjugates for specific and</li> </ol> |

sensitive immuno-PCR. Proc Natl Acad Sci U S A. 109: 3731-6.

8. Spaas, J.H. *et al.* (2013) Culture and characterisation of equine peripheral blood mesenchymal stromal cells. <u>Vet J. 195 (1): 107-13.</u>

9. Sadarangani, A. *et al.* (2015) GLI2 inhibition abrogates human leukemia stem cell dormancy. <u>J Transl Med. 13: 98.</u>

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12. Ruiz, C. *et al.* (2015) Limited genomic heterogeneity of circulating melanoma cells in advanced stage patients. <u>Phys Biol. 12 (1): 016008.</u>

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18. Shishido, S.N. *et al.* (2019) Circulating tumor cells as a response monitor in stage IV non-small cell lung cancer. <u>J Transl Med. 17 (1): 294.</u>

19. Welter, L. *et al.* (2020) Treatment response and tumor evolution: lessons from an extended series of multianalyte liquid biopsies in a metastatic breast cancer patient. <u>Cold</u> <u>Spring Harb Mol Case Stud. 6 (6): a005819.</u>

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 Ndacayisaba, L.J. *et al.* (2022) Characterization of BCMA Expression in Circulating Rare Single Cells of Patients with Plasma Cell Neoplasms. <u>Int J Mol Sci. 23 (21): 13427.</u>
 Qi, E. *et al.* (2023) Investigation of liquid biopsy analytes in peripheral blood of individuals after SARS-CoV-2 infection. EBioMedicine. 90: 104519.

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|-------------------|--|
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|                   | liquid biopsy biomarkers associated with multiple myeloma. <u>NPJ Precis Oncol. 7 (1): 95.</u>   |
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|                   | pancreatic cancer patients undergoing surgery. <u>NPJ Precis Oncol. 8 (1): 36.</u>   |
|                   |  |
| 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  | This product is provided under an intellectual property licence from Life Technologies   |
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## **Related Products**

## **Recommended Negative Controls**

MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 (MCA929A647)

### **Recommended Useful Reagents**

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

| North & South | Tel: +1 800 265 7376           | Worl   |
|---------------|--------------------------------|--------|
| America       | Fax: +1 919 878 3751           |        |
|               | Email: antibody_sales_us@bio-r | ad.com |

Tel: +44 (0)1865 852 700 Norldwide Fax: +44 (0)1865 852 739 Email: antibody\_sales\_uk@bio-rad.com

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Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: antibody\_sales\_de@bio-rad.com

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