

## Datasheet: MCA87SBR815

**BATCH NUMBER 64592531**

<b>Description:</b>	MOUSE ANTI HUMAN CD45:StarBright Red 815
<b>Specificity:</b>	CD45
<b>Other names:</b>	LCA
<b>Format:</b>	StarBright Red 815
<b>Product Type:</b>	Monoclonal Antibody
<b>Clone:</b>	F10-89-4
<b>Isotype:</b>	IgG2a
<b>Quantity:</b>	100 TESTS/0.5ml

## 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 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

### Product Form

Purified IgG conjugated to StarBright Red 815 - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Red 815	654	811

### 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<sub>3</sub>)  
1% Bovine Serum Albumin  
0.1% Pluronic F68  
0.1% PEG 3350

0.05% Tween 20

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**Immunogen** Human T lymphocytes.

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**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 immunized 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 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 [Genesis Cell Isolation System with the CelSelect Slide™ technology](#).

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**Flow Cytometry** Use 5µl of the suggested working dilution to label 10<sup>6</sup> cells in 100µl. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.

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**References**

1. Quenby, S *et al.* (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. [Human Reprod. 14\(9\):2386-2391.](#)
2. 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.](#)
3. 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.](#)
4. Marrinucci, D. *et al.* (2010) Cytomorphology of circulating colorectal tumor cells:a small case series. [J Oncol. 2010: 861341.](#)
5. Paul, G. *et al.* (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. [PLoS One. 7: e35577.](#)
6. 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.](#)
7. 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.](#)

8. Spaas, J.H. *et al.* (2013) Culture and characterisation of equine peripheral blood mesenchymal stromal cells. [Vet J. 195 \(1\): 107-13.](#)
9. Sadarangani, A. *et al.* (2015) GLI2 inhibition abrogates human leukemia stem cell dormancy. [J Transl Med. 13: 98.](#)
10. 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.](#)
11. 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.](#)
12. Ruiz, C. *et al.* (2015) Limited genomic heterogeneity of circulating melanoma cells in advanced stage patients. [Phys Biol. 12 \(1\): 016008.](#)
13. 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.](#)
14. 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.](#)
15. Bianchessi, M. *et al.* (2016) Effect of Fibroblast Growth Factor 2 on Equine Synovial Fluid Chondroprogenitor Expansion and Chondrogenesis. [Stem Cells Int. 2016: 9364974.](#)
16. 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 Rep. 13 \(5\): 611-30.](#)
17. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. [PLoS One. 13 \(2\): e0192244.](#)
18. Shishido, S.N. *et al.* (2019) Circulating tumor cells as a response monitor in stage IV non-small cell lung cancer. [J Transl Med. 17 \(1\): 294.](#)
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. [Cold Spring Harb Mol Case Stud. 6 \(6\): a005819.](#)
20. Ndacayisaba, L.J. *et al.* (2022) Enrichment-Free Single-Cell Detection and Morphogenomic Profiling of Myeloma Patient Samples to Delineate Circulating Rare Plasma Cell Clones [Curr Oncol. 29 \(5\): 2954-72.](#)
21. Shishido, S.N. *et al.* (2022) Liquid Biopsy Landscape in Patients with Primary Upper Tract Urothelial Carcinoma. [Cancers \(Basel\). 14 \(12\): 3007.](#)
22. Chai, S. *et al.* (2022) Identification of epithelial and mesenchymal circulating tumor cells in clonal lineage of an aggressive prostate cancer case. [NPJ Precis Oncol. 6 \(1\): 41.](#)
23. Zhu, J. *et al.* (2022) Sequential Method for Analysis of CTCs and Exosomes from the Same Sample of Patient Blood. [ACS Omega. 7 \(42\): 37581-88.](#)
24. Setayesh, S.M. *et al.* (2022) Multianalyte liquid biopsy to aid the diagnostic workup of breast cancer. [NPJ Breast Cancer. 8 \(1\): 112.](#)
25. Ndacayisaba, L.J. *et al.* (2022) Characterization of BCMA Expression in Circulating Rare Single Cells of Patients with Plasma Cell Neoplasms. [Int J Mol Sci. 23 \(21\): 13427.](#)
26. Qi, E. *et al.* (2023) Investigation of liquid biopsy analytes in peripheral blood of individuals after SARS-CoV-2 infection. [EBioMedicine. 90: 104519.](#)
27. Seo, J. *et al.* (2023) Plasticity of circulating tumor cells in small cell lung cancer. [Sci Rep. 13 \(1\): 11775.](#)

28. Setayesh, S.M. *et al.* (2023) Targeted single-cell proteomic analysis identifies new liquid biopsy biomarkers associated with multiple myeloma. [NPJ Precis Oncol. 7 \(1\): 95.](#)
29. Welter, L. *et al.* (2023) Cell State and Cell Type: Deconvoluting Circulating Tumor Cell Populations in Liquid Biopsies by Multi-Omics. [Cancers \(Basel\). 15 \(15\): 3949.](#)
30. Shishido, S.N. *et al.* (2024) Cancer-related cells and oncosomes in the liquid biopsy of pancreatic cancer patients undergoing surgery. [NPJ Precis Oncol. 8 \(1\): 36.](#)
31. Bai, L. *et al.* (2024) Longitudinal tracking of circulating rare events in the liquid biopsy of stage III-IV non-small cell lung cancer patients. [Discov Oncol. 15 \(1\): 142.](#)
32. Shishido, S.N. *et al.* (2024) Determining the efficacy of ExThera Seraph100 blood filtration in patients diagnosed with pancreatic cancer through the liquid biopsy [BJC Reports. 2: 47.](#)
33. Moellerberndt, J. *et al.* (2024) Impact of platelet lysate on immunoregulatory characteristics of equine mesenchymal stromal cells. [Front Vet Sci. 11: 1385395.](#)
34. Schmidt, M.J. *et al.* (2024) Polyploid cancer cells reveal signatures of chemotherapy resistance. [bioRxiv. Aug 23 \[Preprint\].](#)

<b>Storage</b>	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
<b>Guarantee</b>	12 months from date of despatch
<b>Acknowledgements</b>	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
<b>Health And Safety Information</b>	Material Safety Datasheet documentation #20471 available at: <a href="https://www.bio-rad-antibodies.com/SDS/MCA87SBR815">https://www.bio-rad-antibodies.com/SDS/MCA87SBR815</a> 20471
<b>Regulatory</b>	For research purposes only

## Related Products

### Recommended Useful Reagents

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

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

<b>North &amp; South America</b>	Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: <a href="mailto:antibody_sales_us@bio-rad.com">antibody_sales_us@bio-rad.com</a>	<b>Worldwide</b>	Tel: +44 (0)1865 852 700 Fax: +44 (0)1865 852 739 Email: <a href="mailto:antibody_sales_uk@bio-rad.com">antibody_sales_uk@bio-rad.com</a>	<b>Europe</b>	Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: <a href="mailto:antibody_sales_de@bio-rad.com">antibody_sales_de@bio-rad.com</a>
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