

# Datasheet: MCA87SBV515

**BATCH NUMBER 100004359**

|                      |   |
|----------------------|---|
| <b>Description:</b>  | MOUSE ANTI HUMAN CD45:StarBright Violet 515 |
| <b>Specificity:</b>  | CD45  |
| <b>Other names:</b>  | LCA   |
| <b>Format:</b>       | StarBright Violet 515                       |
| <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  |                   |                     |                   |                       |     |     |  |  |
|--------------------------|--|-------------------|---------------------|-------------------|-----------------------|-----|-----|--|--|
| Species Cross Reactivity | Reacts with: Horse<br><b>N.B.</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 StarBright Violet 515 - liquid  |                   |                     |                   |                       |     |     |  |  |
| Max Ex/Em                | <table><tr><th>Fluorophore</th><th>Excitation Max (nm)</th><th>Emission Max (nm)</th></tr><tr><td>StarBright Violet 515</td><td>401</td><td>516</td></tr></table>  | Fluorophore       | Excitation Max (nm) | Emission Max (nm) | StarBright Violet 515 | 401 | 516 |  |  |
| Fluorophore              | Excitation Max (nm)  | Emission Max (nm) |                     |                   |                       |     |     |  |  |
| StarBright Violet 515    | 401  | 516               |                     |                   |                       |     |     |  |  |
| Preparation              | 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 (NaN <sub>3</sub> )<br>1% Bovine Serum Albumin<br>0.1% Pluronic F68<br>0.1% PEG 3350  |
| <b>Immunogen</b>                | Human T lymphocytes.   |
| <b>External Database Links</b>  | <b>UniProt:</b><br><a href="#">P08575</a> <a href="#">Related reagents</a><br><br><b>Entrez Gene:</b><br><a href="#">5788</a> PTPRC <a href="#">Related reagents</a>   |
| <b>Synonyms</b>                 | CD45   |
| <b>Fusion Partners</b>          | Spleen cells from immunised BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.   |
| <b>Specificity</b>              | <p><b>Mouse anti Human CD45 antibody, clone F10-89-4</b> 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.</p> <p>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.</p> <p>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.</p> <p>Mouse anti Human CD45 antibody, clone F10-89-4 is routinely tested in flow cytometry on human peripheral blood leucocytes</p>   |
| <b>Flow Cytometry</b>           | Use 5ul of the suggested working dilution to label 10 <sup>6</sup> cells in 100ul. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.  |
| <b>References</b>               | <ol style="list-style-type: none"> <li>1. Dalchau, R. <i>et al.</i> (1980) Monoclonal antibody to a human leukocyte-specific membrane glycoprotein probably homologous to the leukocyte-common (L-C) antigen of the rat. <a href="#">Eur J Immunol. 10 (10): 737-44.</a></li> <li>2. Quenby, S <i>et al.</i> (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. <a href="#">Human Reprod. 14(9):2386-2391.</a></li> <li>3. Hauser, P.V. <i>et al.</i> (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. <a href="#">Am J Pathol. 177: 2011-21.</a></li> <li>4. Mallam, E. <i>et al.</i> (2010) Characterization of <i>in vitro</i> expanded bone marrow-derived mesenchymal stem cells from patients with multiple sclerosis. <a href="#">Mult Scler. 16: 909-18.</a></li> <li>5. Marrinucci, D. <i>et al.</i> (2010) Cytomorphology of circulating colorectal tumor cells:a small</li> </ol> |

- 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.](#)
  19. 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.](#)
  20. Welter, L. *et al.* (2020) Treatment response and tumor evolution: Lessons from an extended series of multi-analyte liquid biopsies in a metastatic breast cancer patient. [Cold Spring Harb Mol Case Stud. Nov 17 \[Epub ahead of print\].](#)

|                          |   |
|--------------------------|---|
| <b>Storage</b>           | Store at +4°C. DO NOT FREEZE.<br>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</b> | Material Safety Datasheet documentation #20438 available at:                                    |

**Information** <https://www.bio-rad-antibodies.com/SDS/MCA87SBV515>  
20438

---

**Regulatory** For research purposes only

---

## Related Products

### 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](mailto: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](mailto: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](mailto:antibody_sales_de@bio-rad.com)

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://www.bio-rad-antibodies.com/datasheets)  
'M373254:200901'

**Printed on 18 Oct 2024**

---

© 2024 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)