

## Datasheet: MCA87SBY720

**BATCH NUMBER 100007331**

<b>Description:</b>	MOUSE ANTI HUMAN CD45:StarBright Yellow 720
<b>Specificity:</b>	CD45
<b>Other names:</b>	LCA
<b>Format:</b>	StarBright Yellow 720
<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 Yellow 720 - liquid

### Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Yellow 720	548	719

### 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

---

**Immunogen** Human T lymphocytes.

---

**External Database Links**

**UniProt:**

[P08575](#)   [Related reagents](#)

**Entrez Gene:**

[5788](#)   PTPRC   [Related reagents](#)

---

**Synonyms** CD45

---

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

---

**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.

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

---

**Flow Cytometry** Use 5ul of the suggested working dilution to label  $10^6$  cells in 100ul. Best practices suggest a 5 minutes centrifugation at 6,000g prior to sample application.

---

**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 Rep. 13 \(5\): 611-30.](#)
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 multianalyte liquid biopsies in a metastatic breast cancer patient. [Cold Spring Harb Mol Case Stud. 6 \(6\): a005819.](#)
21. 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.](#)
22. Shishido, S.N. *et al.* (2022) Liquid Biopsy Landscape in Patients with Primary Upper Tract Urothelial Carcinoma. [Cancers \(Basel\). 14 \(12\): 3007.](#)
23. 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.](#)
24. 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.](#)
25. Setayesh, S.M. *et al.* (2022) Multianalyte liquid biopsy to aid the diagnostic workup of breast cancer. [NPJ Breast Cancer. 8 \(1\): 112.](#)
26. 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.](#)

<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/MCA87SBY720">https://www.bio-rad-antibodies.com/SDS/MCA87SBY720</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>
----------------------------------	---	------------------	---	---------------	---

To find a batch/lot specific datasheet for this product, please use our online search tool at: [bio-rad-antibodies.com/datasheets](https://bio-rad-antibodies.com/datasheets)  
'M416096:230130'

Printed on 21 Feb 2024