

Datasheet: MCA87B

BATCH NUMBER 162168

Description:	MOUSE ANTI HUMAN CD45:Biotin
Specificity:	CD45
Other names:	LCA
Format:	Biotin
Product Type:	Monoclonal Antibody
Clone:	F10-89-4
Isotype:	IgG2a
Quantity:	0.1 mg

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.

	Yes	No	Not Determined	Suggested Dilution
Flow Cytometry	▪			

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.

Target Species	Human
Product Form	Purified IgG conjugated to Biotin - liquid
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 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.1 mg/ml
Immunogen	Human T lymphocytes.

External Database Links	UniProt: P08575 Related reagents
	Entrez Gene: 5788 PTPRC Related reagents
Synonyms	CD45
RRID	AB_323920
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse NS-1 myeloma cell line.
Specificity	<p>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.</p> <p>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.</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. It is routinely tested in flow cytometry on human peripheral blood leucocytes.</p> <p>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.</p>
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	<ol style="list-style-type: none"> 1. Quenby, S <i>et al.</i> (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. Human Reprod. 14(9):2386-2391. 2. Hauser, P.V. <i>et al.</i> (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. Am J Pathol. 177: 2011-21. 3. 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. Mult Scler. 16: 909-18. 4. Marrinucci, D. <i>et al.</i> (2010) Cytomorphology of circulating colorectal tumor cells:a small case series. J Oncol. 2010: 861341. 5. Paul, G. <i>et al.</i> (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. PLoS One. 7: e35577. 6. De Schauwer, C. <i>et al.</i> (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. <i>et al.</i> (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. <i>et al.</i> (2013) Culture and characterisation of equine peripheral blood mesenchymal stromal cells. Vet J. 195 (1): 107-13. 9. Sadarangani, A. <i>et al.</i> (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- β 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.](#)

Storage	<p>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.</p> <p>Avoid repeated freezing and thawing as this may denature the antibody. Storage in frost-free freezers is not recommended.</p>
Guarantee	12 months from date of despatch
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA87B 10041
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

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

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

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To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M381501:210512'

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