Datasheet: MCA87SBV475

BATCH NUMBER 100005836

Description:	MOUSE ANTI HUMAN CD45:StarBright Violet 475
Specificity:	CD45
Other names:	LCA
Format:	StarBright Violet 475
Product Type:	Monoclonal Antibody
Clone:	F10-89-4
Isotype:	IgG2a
Quantity:	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.

	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 Violet 475 - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
StarBright Violet 475	405	479

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_3)
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 immunized 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. 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.
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. 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-β1. 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.

Storage	Store at +4°C. DO NOT FREEZE. This product should be stored undiluted.
Guarantee	12 months from date of despatch
Acknowledgements	This product is covered by U.S. Patent No. 10,150,841 and related U.S. and foreign counterparts
Health And Safety Information	Material Safety Datasheet documentation #20471 available at: https://www.bio-rad-antibodies.com/SDS/MCA87SBV475 20471
Regulatory	For research purposes only

Related Products

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A)
HUMAN SEROBLOCK (BUF070B)

North & South America Tel: +1 800 265 7376 Fax: +1 919 878 3751 Email: 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

Europe Tel: +49 (0) 89 8090 95 21 Fax: +49 (0) 89 8090 95 50 Email: 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
'M389984:210817'

Printed on 10 Oct 2024

© 2024 Bio-Rad Laboratories Inc | Legal | Imprint