Datasheet: MCA87A700 BATCH NUMBER 162827

Description:	MOUSE ANTI HUMAN CD45:Alexa Fluor® 700
Specificity:	CD45
Other names:	LCA
Format:	ALEXA FLUOR® 700
Product Type:	Monoclonal Antibody
Clone:	F10-89-4
Isotype:	lgG2a
Quantity:	100 TESTS/1ml

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 <u>www.bio-rad-antibodies.com/protocols</u> .						
		Yes	No Not	Determined	Suggested Dilution		
	Flow Cytometry	-			Neat - 1/10		
	Where this antibody ha necessarily exclude its a guide only. It is recom system using appropria	use in such pro nmended that t	ocedures. Su he user titrate	ggested workines the antibody	ng dilutions are given as		
Target Species	Human						
Product Form	Purified IgG conjugated to Alexa Fluor® 700 - liquid						
Max Ex/Em	Fluorophore	Excitation Max	(nm) Emiss	ion Max (nm)			
	Alexa Fluor®700	702		723			
Preparation	Purified IgG prepared b supernatant	by affinity chror	natography o	n Protein A fro	m tissue culture		
Buffer Solution	Phosphate buffered saline						
Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum A	lbumin					
Approx. Protein	IgG concentration 0.05	mg/ml					

Concentrations

Immunogen	Human T lymphocytes.
External Database Links	UniProt: <u>P08575</u> <u>Related reagents</u>
	Entrez Gene: 5788 PTPRC Related reagents
Synonyms	CD45
RRID	AB_844503
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 <u>Genesis Cell Isolation System with the CelSelect SlideTM technology</u> .
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells or 100ul whole blood.
References	 Quenby, S <i>et al.</i> (1999) Pre-implantation endometrial leukocytes in women with recurrent miscarriage. <u>Human Reprod. 14(9):2386-2391.</u> Hauser, P.V. <i>et al.</i> (2010) Stem cells derived from human amniotic fluid contribute to acute kidney injury recovery. <u>Am J Pathol. 177: 2011-21.</u> 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. <u>Mult Scler. 16: 909-18.</u> Marrinucci, D. <i>et al.</i> (2010) Cytomorphology of circulating colorectal tumor cells:a small case series. <u>J Oncol. 2010: 861341.</u> Paul, G. <i>et al.</i> (2012) The adult human brain harbors multipotent perivascular mesenchymal stem cells. <u>PLoS One. 7: e35577.</u> De Schauwer, C. <i>et al.</i> (2012) In search for cross-reactivity to immunophenotype equine mesenchymal stromal cells by multicolor flow cytometry. <u>Cytometry A. 81 (4): 312-23.</u> 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. *et al.* (2013) Culture and characterisation of equine peripheral blood mesenchymal stromal cells. <u>Vet J. 195 (1): 107-13.</u>

9. Sadarangani, A. *et al.* (2015) GLI2 inhibition abrogates human leukemia stem cell dormancy. <u>J Transl Med. 13: 98.</u>

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. <u>Mol Oncol. 9 (4):</u> 850-60.

12. Ruiz, C. *et al.* (2015) Limited genomic heterogeneity of circulating melanoma cells in advanced stage patients. <u>Phys Biol. 12 (1): 016008.</u>

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. <u>PLoS One. 11 (1): e0147400.</u>

14. Gomiero, C. *et al.* (2016) Tenogenic induction of equine mesenchymal stem cells by means of growth factors and low-level laser technology. <u>Vet Res Commun. 40 (1): 39-48.</u>
15. Bianchessi, M. *et al.* (2016) Effect of Fibroblast Growth Factor 2 on Equine Synovial Fluid Chondroprogenitor Expansion and Chondrogenesis. <u>Stem Cells Int. 2016: 9364974.</u>
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. <u>Stem Cell Rev Rep. 13 (5): 611-30.</u>

17. GarikipatiV, N.S. *et al.* (2018) Isolation and characterization of mesenchymal stem cells from human fetus heart. <u>PLoS One. 13 (2): e0192244.</u>

18. Shishido, S.N. *et al.* (2019) Circulating tumor cells as a response monitor in stage IV non-small cell lung cancer. <u>J Transl Med. 17 (1): 294.</u>

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. <u>Cold</u> <u>Spring Harb Mol Case Stud. 6 (6): a005819.</u>

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 <u>Curr Oncol. 29 (5): 2954-72.</u>

21. Shishido, S.N. *et al.* (2022) Liquid Biopsy Landscape in Patients with Primary Upper Tract Urothelial Carcinoma. <u>Cancers (Basel). 14 (12): 3007.</u>

22. Chai, S. *et al.* (2022) Identification of epithelial and mesenchymal circulating tumor cells in clonal lineage of an aggressive prostate cancer case. <u>NPJ Precis Oncol. 6 (1): 41.</u>
23. Zhu, J. *et al.* (2022) Sequential Method for Analysis of CTCs and Exosomes from the Same Sample of Patient Blood. <u>ACS Omega. 7 (42): 37581-88.</u>

24. Setayesh, S.M. *et al.* (2022) Multianalyte liquid biopsy to aid the diagnostic workup of breast cancer. <u>NPJ Breast Cancer. 8 (1): 112.</u>

 Ndacayisaba, L.J. *et al.* (2022) Characterization of BCMA Expression in Circulating Rare Single Cells of Patients with Plasma Cell Neoplasms. <u>Int J Mol Sci. 23 (21): 13427.</u>
 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

	<u>Rep. 13 (1): 11775.</u>
	28. Setayesh, S.M. <i>et al.</i> (2023) Targeted single-cell proteomic analysis identifies new
	liquid biopsy biomarkers associated with multiple myeloma. <u>NPJ Precis Oncol. 7 (1): 95.</u>
	29. Welter, L. <i>et al.</i> (2023) Cell State and Cell Type: Deconvoluting Circulating Tumor Cell
	Populations in Liquid Biopsies by Multi-Omics. <u>Cancers (Basel). 15 (15): 3949.</u>
	30. Shishido, S.N. <i>et al.</i> (2024) Cancer-related cells and oncosomes in the liquid biopsy of
	pancreatic cancer patients undergoing surgery. <u>NPJ Precis Oncol. 8 (1): 36.</u>
Storage	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.
	Avoid repeated freezing and thawing as this may denature the antibody. Storage in
	frost-free freezers is not recommended. This product is photosensitive and should be
	protected from light.
Guarantee	12 months from date of despatch
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Related Products

Recommended Negative Controls

MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 700 (MCA929A700)

Recommended Useful Reagents

HUMAN SEROBLOCK (BUF070A) HUMAN SEROBLOCK (BUF070B)

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	Email: antibody_sales_us@bio-rad.	com

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