

Datasheet: MCA89A647T

Description:	MOUSE ANTI HUMAN CD44:Alexa Fluor® 647
Specificity:	CD44
Other names:	H-CAM, PGP-1
Format:	ALEXA FLUOR® 647
Product Type:	Monoclonal Antibody
Clone:	F10-44-2
Isotype:	IgG2a
Quantity:	25 TESTS/0.25ml

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 - 1/10

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

Species Cross Reactivity

Reacts with: Cynomolgus monkey

N.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 Alexa Fluor® 647 - liquid

Max Ex/Em	Fluorophore	Excitation Max (nm)	Emission Max (nm)
	Alexa Fluor®647	650	665

Preparation

Purified IgG prepared by affinity chromatography on Protein G from tissue culture supernatant

Buffer Solution

Phosphate buffered saline

Preservative Stabilisers	0.09% Sodium Azide 1% Bovine Serum Albumin
Approx. Protein Concentrations	IgG concentration 0.05 mg/ml
Immunogen	Human T lymphocytes.
External Database Links	UniProt: P16070 Related reagents Entrez Gene: 960 CD44 Related reagents
Synonyms	LHR, MDU2, MDU3, MIC4
RRID	AB_1102041
Fusion Partners	Spleen cells of immunised BALB/c mice were fused with cells from the mouse NS1 myeloma line.
Specificity	Mouse anti Human CD44 antibody, clone F10-44-2 recognizes human CD44, also known as Epican, HCAM, Phagocytic Glycoprotein 1 (PGP-1) or Hyaluronate receptor . Human CD44 is a single pass, type I transmembrane glycoprotein of variable molecular weight ranging from ~90kDa to ~220kDa depending on alternate splicing of the variable region exons and on the degree of glycosylation. CD44 is expressed on multiple cell types and is involved in multiple functions including cell-cell interactions and cell-extracellular matrix binding. Hyaluronan, a high molecular weight polysaccharide component of the extracellular matrix acts as the principal ligand for the CD44 receptor (Laurent and Fraser 1992). CD44 isoforms containing one or more sequences encoded by the variant region exons have a much more restricted expression pattern both in terms of organ specificity and immune activation (Mackay et al. 1994) . Mouse anti Human CD44 antibody, clone F10-44-2 recognizes an epitope on human CD44 outside the regions coded for by the variable region exons and is thus expected to recognize all isoforms of human CD44 (Mackay et al. 1994).
Flow Cytometry	Use 10ul of the suggested working dilution to label 10 ⁶ cells in 100ul.
References	1. Dalchau, R. <i>et al.</i> (1980) Monoclonal antibody to a human brain-granulocyte-T lymphocyte antigen probably homologous to the W 3/13 antigen of the rat. Eur J Immunol. 10 (10): 745-9. 2. Daar, A.S. & Fabre, J.W. (1981) Demonstration with monoclonal antibodies of an unusual mononuclear cell infiltrate and loss of normal epithelial membrane antigens in human breast carcinomas. Lancet. 2 (8244): 434-8.

3. Mackay, F. *et al.* (1993) Tumor necrosis factor alpha (TNF-alpha)-induced cell adhesion to human endothelial cells is under dominant control of one TNF receptor type, TNF-R55. [J Exp Med. 177: 1277-86.](#)
4. Cattoretti, G. *et al.* (1993) Antigen unmasking on formalin-fixed, paraffin-embedded tissue sections. [J Pathol. 171 \(2\): 83-98.](#)
5. Oshiro, N. *et al.* (1998) Phosphorylation of moesin by rho-associated kinase (Rho-kinase) plays a crucial role in the formation of microvilli-like structures. [J Biol Chem. 273: 34663-6.](#)
6. Ito, T. *et al.* (1999) A CD1a+/CD11c+ subset of human blood dendritic cells is a direct precursor of Langerhans cells. [J Immunol. 163: 1409-19.](#)
7. Roscic-Mrkic, B. *et al.* (2003) RANTES (CCL5) uses the proteoglycan CD44 as an auxiliary receptor to mediate cellular activation signals and HIV-1 enhancement. [Blood. 102: 1169-77.](#)
8. Sundström, M. (2003) Functional and phenotypic studies of two variants of a human mast cell line with a distinct set of mutations in the c-kit proto-oncogene. [Immunology. 108: 89-97.](#)
9. Avigdor, A. *et al.* (2004) CD44 and hyaluronic acid cooperate with SDF-1 in the trafficking of human CD34+ stem/progenitor cells to bone marrow. [Blood. 103: 2981-9.](#)
10. Chang, Y.C. *et al.* (2006) The glycosaminoglycan-binding domain of decoy receptor 3 is essential for induction of monocyte adhesion. [J Immunol. 176: 173-80.](#)
11. Hughes, G.J. *et al.* (2007) Virus immunocapture provides evidence of CD8 lymphocyte-derived HIV-1 in vivo. [AIDS. 21: 1507-13.](#)
12. Hughes, G.J. *et al.* (2007) Virus immunocapture provides evidence of CD8 lymphocyte-derived HIV-1 *in vivo*. [AIDS. 21: 1507-13.](#)
13. Stolzinger, A. *et al.* (2008) Age-related changes in human bone marrow-derived mesenchymal stem cells: consequences for cell therapies. [Mech Ageing Dev. 129: 163-73.](#)
14. Horwitz, K.B. *et al.* (2008) Rare steroid receptor-negative basal-like tumorigenic cells in luminal subtype human breast cancer xenografts. [Proc Natl Acad Sci U S A. 105: 5774-9.](#)
15. Amirghofran, Z. *et al.* (2008) Evaluation of CD44 and CD44v6 in colorectal carcinoma patients: soluble forms in relation to tumor tissue expression and metastasis. [J Gastrointest Cancer. 39: 73-8.](#)
16. Walker, M.M. *et al.* (2008) The intercellular adhesion molecule, cadherin-10, is a marker for human prostate luminal epithelial cells that is not expressed in prostate cancer. [Mod Pathol. 2008 Feb;21: 85-95.](#)
17. Reim, F. *et al.* (2009) Immunoselection of breast and ovarian cancer cells with trastuzumab and natural killer cells: selective escape of CD44^{high}/CD24^{low}/HER2^{low} breast cancer stem cells. [Cancer Res. 69: 8058-66.](#)
18. Norrmen, C. *et al.* (2010) Liprin (beta)1 is highly expressed in lymphatic vasculature and is important for lymphatic vessel integrity. [Blood. 115: 906-9.](#)
19. 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.](#)
20. Yin, S. *et al.* (2010) Chondrogenic transdifferentiation of human dermal fibroblasts stimulated with cartilage-derived morphogenetic protein 1. [Tissue Eng Part A. 16: 1633-43.](#)
21. Yi, T. *et al.* (2015) Manufacture of Clinical-Grade Human Clonal Mesenchymal Stem

Cell Products from Single Colony Forming Unit-Derived Colonies Based on the Subfractionation Culturing Method. [Tissue Eng Part C Methods. 21 \(12\): 1251-62.](#)

22. Lee, H.J. *et al.* (2017) ICOSL expression in human bone marrow-derived mesenchymal stem cells promotes induction of regulatory T cells. [Sci Rep. 7: 44486.](#)

23. Xu, L. *et al.* (2017) Umbilical cord-derived mesenchymal stem cells on scaffolds facilitate collagen degradation via upregulation of MMP-9 in rat uterine scars. [Stem Cell Res Ther. 8 \(1\): 84.](#)

24. Squillace, N. *et al.* (2018) Evaluation of adhesion molecules and immune parameters in HIV-infected patients treated with an atazanavir/ritonavir- compared with a lopinavir/ritonavir-based regimen. [J Antimicrob Chemother. 73 \(8\): 2162-70.](#)

25. Hou, B. *et al.* (2018) Xenogeneic acellular nerve scaffolds supplemented with autologous bone marrow-derived stem cells promote axonal outgrowth and remyelination but not nerve function. [J Biomed Mater Res A. 106 \(12\): 3065-78.](#)

26. Noda, G.S. *et al.* (2020) Specificities and isotypes of erythrocytes autoantibodies in patients with warm autoimmune hemolytic anemia [Rev Cubana Hematol Inmunol Hemoter 36\(4\): e1283](#)

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.
Guarantee	12 months from date of despatch
Acknowledgements	This product is provided under an intellectual property licence from Life Technologies Corporation. The transfer of this product is contingent on the buyer using the purchase product solely in research, excluding contract research or any fee for service research, and the buyer must not sell or otherwise transfer this product or its components for (a) diagnostic, therapeutic or prophylactic purposes; (b) testing, analysis or screening services, or information in return for compensation on a per-test basis; (c) manufacturing or quality assurance or quality control, or (d) resale, whether or not resold for use in research. For information on purchasing a license to this product for purposes other than as described above, contact Life Technologies Corporation, 5791 Van Allen Way, Carlsbad CA 92008 USA or outlicensing@thermofisher.com
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA89A647T
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

[MOUSE IgG2a NEGATIVE CONTROL:Alexa Fluor® 647 \(MCA929A647\)](#)

Recommended Useful Reagents

[HUMAN SEROBLOCK \(BUF070A\)](#)
[HUMAN SEROBLOCK \(BUF070B\)](#)

Product inquiries: www.bio-rad-antibodies.com/technical-support

To find a batch/lot specific datasheet for this product, please use our online search tool at: bio-rad-antibodies.com/datasheets
'M381621:210512'

Printed on 08 Oct 2025

© 2025 Bio-Rad Laboratories Inc | [Legal](#) | [Imprint](#)