

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.		
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

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 10⁶ cells in 100ul.

References

1. Dalchau, R. *et al.* (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. Cattoretti, G. *et al.* (1993) Antigen unmasking on formalin-fixed, paraffin-embedded tissue sections. [J Pathol. 171 \(2\): 83-98.](#)
4. 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.](#)
5. 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.](#)
6. Hughes, G.J. *et al.* (2007) Virus immunocapture provides evidence of CD8 lymphocyte-derived HIV-1 in vivo. [AIDS. 21: 1507-13.](#)
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. 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.](#)
9. 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.](#)
10. 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.](#)
11. 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.](#)

12. 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.](#)
13. 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.](#)
14. Reim, F. *et al.* (2009) Immunoselection of breast and ovarian cancer cells with trastuzumab and natural killer cells: selective escape of CD44high/CD24low/HER2low breast cancer stem cells. [Cancer Res. 69: 8058-66.](#)
15. Hughes, G.J. *et al.* (2007) Virus immunocapture provides evidence of CD8 lymphocyte-derived HIV-1 in vivo. [AIDS. 21: 1507-13.](#)
16. 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.](#)
17. 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.](#)
18. 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.](#)
19. 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.](#)
20. 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.](#)
21. 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.](#)
22. 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.](#)
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.](#)

Storage

Store at +4°C or at -20°C if preferred.

This product should be stored undiluted.

Storage in frost free freezers is not recommended. Avoid repeated freezing and thawing as this may denature the antibody. Should this product contain a precipitate we recommend microcentrifugation before use.

Shelf Life

18 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:
10041: <https://www.bio-rad-antibodies.com/uploads/MSDS/10041.pdf>

Related Products

Recommended Negative Controls

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

Recommended Useful Reagents

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

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

North & South

Tel: +1 800 265 7376

America

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

'M304164:170321'

Printed on 05 May 2018