Datasheet: MCA2411F

Description:	MOUSE ANTI DOG CD34:FITC
Specificity:	CD34
Format:	FITC
Product Type:	Monoclonal Antibody
Clone:	1H6
Isotype:	IgG1
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	▪			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

Dog

Product Form

Purified IgG conjugated to Fluorescein Isothiocyanate Isomer 1 (FITC) - liquid

Max Ex/Em

Fluorophore	Excitation Max (nm)	Emission Max (nm)
FITC	490	525

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	Canine CD34 fusion protein.
External Database Links	**UniProt:** Q28270 Related reagents **Entrez Gene:** 415130 CD34 Related reagents
RRID	AB_2275714
Fusion Partners	Spleen cells from immunized BALB/c mice were fused with cells of the mouse NS-1/FOX-NY myeloma cell line.
Specificity	**Mouse anti dog CD34 antibody, clone 1H6** recognizes the canine homologue of CD34, a glycosylated type 1 transmembrane protein of approximately 110 kDa (McSweeney *et al.* 1998) expressed on the cell suface of endothelial cells and haematopoietic stem cells. Mouse anti dog CD34 antibody, clone 1H6 is a key marker of canine hematopoietic progenitor cells and is reported for use in CD34+ enrichment assays, (Goerner *et al.* 2001) and (Horn *et al.* 2004).
Flow Cytometry	Use 10ul of the suggested working dilution to label 1x10^6 cells in 100ul.
References	1. Goerner, M. *et al.* (1999) The use of granulocyte colony-stimulating factor during retroviral transduction on fibronectin fragment CH-296 enhances gene transfer into hematopoietic repopulating cells in dogs. Blood. 94 (7): 2287-92. 2. Bhattacharya, V. *et al.* (2000) Enhanced endothelialization and microvessel formation in polyester grafts seeded with CD34(+) bone marrow cells. Blood. 95 (2): 581-5. 3. Goerner, M. *et al.* (2001) Sustained multilineage gene persistence and expression in dogs transplanted with CD34(+) marrow cells transduced by RD114-pseudotype oncoretrovirus vectors. Blood. 98 (7): 2065-70. 4. Georges, G. *et al.* (2001) Engraftment of DLA-haploidentical marrow with ex vivo expanded, retrovirally transduced cytotoxic T lymphocytes. Blood. 98:3447-55. 5. Horn, P.A. *et al.* (2004) Efficient lentiviral gene transfer to canine repopulating cells using an overnight transduction protocol. Blood. 103 (10): 3710-6. 6. Avallone, G. *et al.* (2007) The spectrum of canine cutaneous perivascular wall tumors: morphologic, phenotypic and clinical characterization. Vet Pathol. 44 (5): 607-20. 7. Palmieri, C. *et al.* (2013) Use of electron microscopy to classify canine perivascular wall tumors. Vet Pathol. 50 (2): 226-33. 8. Bearden, R.N. *et al.* (2017) *In-vitro* characterization of canine multipotent stromal cells isolated from synovium, bone marrow, and adipose tissue: a donor-matched comparative study. Stem Cell Res Ther. 8 (1): 218. 9. Trindade, A.B. *et al.* (2017) Mesenchymal-like stem cells in canine ovary show high differentiation potential. Cell Prolif. Oct 08 [Epub ahead of print]. 10. Lee, S.H. *et al.* (2016) Impact of local injection of brain-derived neurotrophic factor-expressing mesenchymal stromal cells (MSCs) combined with intravenous MSC delivery in a canine model of chronic spinal cord injury. Cytotherapy. Oct 28 [Epub ahead of print].

11. Muir, P. *et al.* (2016) Autologous Bone Marrow-Derived Mesenchymal Stem Cells Modulate Molecular Markers of Inflammation in Dogs with Cruciate Ligament Rupture. PLoS One. 11 (8): e0159095.
12. Rajawat, Y.S. *et al.* (2021) *In Vivo* Gene Therapy for Canine SCID-X1 Using Cocal-Pseudotyped Lentiviral Vector. Hum Gene Ther. 32 (1-2): 113-27.
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14. Tongu, E.A.O. *et al.* (2021) Allogenic mesenchymal stem cell-conditioned medium does not affect sperm parameters and mitigates early endometrial inflammatory responses in mares. Theriogenology. 169: 1-8.
15. Jaensch, S. *et al.* (2022) Clinicopathologic and immunophenotypic features in dogs with presumptive large granular lymphocyte leukaemia Australian Veterinary Journal. [Epub ahead of print].
16. Salari Sedigh, H. *et al.* (2023) *In vitro* investigation of canine periodontal ligament-derived mesenchymal stem cells: A possibility of promising tool for periodontal regeneration. J Oral Biol Craniofac Res. 13 (3): 403-11.
17. Papa, P.M. *et al.* (2023) Intratesticular transplantation of allogenic mesenchymal stem cells mitigates testicular destruction after induced heat stress in Miniature-horse stallions. J Equine Vet Sci. 132: 104961.
18. Rezaei, M. *et al.* (2019) Transplantation of Bone Marrow-Derived Mesenchymal Stem Cells, Platelet-Rich Plasma, and Fibrin Glue for Periodontal Regeneration. Int J Periodontics Restorative Dent. 39 (1): e32-e45.
19. Yang, V.K. *et al.* (2021) Intravenous administration of allogeneic Wharton jelly-derived mesenchymal stem cells for treatment of dogs with congestive heart failure secondary to myxomatous mitral valve disease. Am J Vet Res. 82 (6): 487-93.
20. Crain, S.K. *et al.* (2019) Extracellular Vesicles from Wharton's Jelly Mesenchymal Stem Cells Suppress CD4 Expressing T Cells Through Transforming Growth Factor Beta and Adenosine Signaling in a Canine Model. Stem Cells Dev. 28 (3): 212-26.
21. Sheng, R. *et al.* (2023) Prognostic significance of CD25 expression in dogs with a noninvasive diagnosis of B-cell lymphoma treated with CHOP chemotherapy. Vet Comp Oncol. 21 (1): 28-35.
22. Millanta, F. *et al.* (2020) Cytologic grading of canine and feline spindle-cell sarcomas of soft tissues and its correlation with histologic grading. Top Companion Anim Med. 41: 100458.
23. Rogato, F. *et al.* (2024) Leukemia cutis as a prominent clinical sign in a dog with acute myeloid leukemia. Vet Clin Pathol. 53 (4): 448-57.

Further Reading

1. McSweeney, P. *et al*. (1996) Canine CD34: cloning of the cDNA and evaluation of an antiserum to recombinant protein. Blood. 88:1992-2003.

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
Health And Safety Information	Material Safety Datasheet documentation #10041 available at: https://www.bio-rad-antibodies.com/SDS/MCA2411F 10041
Regulatory	For research purposes only

Related Products

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL:FITC (MCA928F)

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

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