Datasheet: MCA1998S

Product Details

Description: MOUSE ANTI DOG CD4
Specificity: CD4
Format: S/N
Product Type: Monoclonal Antibody
Clone: CA13.1E4
Isotype: IgG1
Quantity: 2 ml

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.

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<tr>
<th>Application</th>
<th>Yes</th>
<th>No</th>
<th>Not Determined</th>
<th>Suggested Dilution</th>
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<td>Flow Cytometry</td>
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<td>Immunohistology - Frozen</td>
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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

Tissue Culture Supernatant - liquid

Preservative Stabilisers

0.1% Sodium Azide

Immunogen

Canine Thymocytes

External Database Links

UniProt: P33705 Related reagents

Entrez Gene: 403931 CD4 Related reagents

Fusion Partners

Spleen cells from immunised Balb/c mice were fused with cells of the P3X63-Ag.653 mouse myeloma cell line.

Specificity

Mouse anti Dog CD4 antibody (CA13.1E4), a monoclonal antibody specific for canine CD4. CA13.1E4 was clustered at the first Canine Leukocyte Antigen Workshop (Claw) [Cobbold et al.](http://www.bio-rad-antibodies.com/protocols).

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identifies, by immunoprecipitation a 60kDa monomeric protein under both reducing and non-reducing conditions. Canine CD4 is a surface glycoprotein expressed by non CD8 expressing T lymphocytes, with similar developmental and functional characteristics to T helper cells described in other mammalian species. Mouse anti Dog CD4 also recognizes a population of CD8 positive cells in the canine thymus (Moore et al. 1992).

CD4 expression has also been reported on a population of CD3 positive peripheral blood T lymphocytes which are double positive for CD4 and CD8 (Bismarck et al. 2012). Similar reports have been made for cynomolgus monkey (Nam et al. 2000), pig (Saalmuller et al. 1987, Pesceowitz et al. 1990) as well as rat, chicken and human (reviewed Zuckermann 1999).

Uniquely amongst mammalian species clone CA13.1E4 also recognizes CD4 expressed on canine neutrophils at a similar density to that expressed on canine T helper cells. The functional significance of this is not understood and remains enigmatic in view of the roles described for CD4 in canine and other mammalian species (Moore et al. 1992).

Clone CA13.1E4 also demonstrates immunohistological staining of splenic marginal zone macrophages (Moore et al. 1992). Other macrophage populations, such as splenic red pulp macrophages and Langerhans cells do not stain with clone CA13.1E4. Canine CD4 positive T cells can be further characterized according to their simultaneous expression of CD45RA as recognized by Rat anti Canine anti CD45RA clone CA4.1D3 in a manner analogous to that seen with human T cells (Moore et al. 1992).

Clone CA13.1E4 has been used amongst a large panel of anti-canine monoclonal antibodies for the study of various lymphoproliferative diseases. T lymphocytes in large granular lymphocyte (LGL) lymphocytosis are negative for CD4 (McDonough and Moore 2000). Dogs with chronic myelogenous leukemia demonstrate CD4 positive staining on neutrophils (Tarrant et al. 2001). CD4 expression varies considerably between various canine leukemias (Villiers 2002).

Flow Cytometry
Use 25ul of the suggested working dilution to label 10^6 cells or 100ul whole blood.

Histology Positive Control Tissue
Spleen, lymph node

References

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.

Health And Safety Information

Material Safety Datasheet documentation #10336 available at:

Regulatory

For research purposes only

Recommended Products

Recommended Secondary Antibodies

Goat Anti Mouse IgG IgA IgM (STAR87...) Alk. Phos., HRP
Goat Anti Mouse IgG (STAR77...) HRP
Rabbit Anti Mouse IgG (STAR12...) RPE
Rabbit Anti Mouse IgG (STAR8...) DyLight®800
Rabbit Anti Mouse IgG (STAR13...) HRP
Goat Anti Mouse IgG (STAR76...) RPE
Goat Anti Mouse IgG (STAR70...) FITC
Goat Anti Mouse IgG (H/L) (STAR117...) Alk. Phos., DyLight®488, DyLight®549, DyLight®649, DyLight®680, DyLight®800, FITC, HRP

Recommended Negative Controls

MOUSE IgG1 NEGATIVE CONTROL (MCA928)